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Richard C. Ausness

University of Kentucky College of Law, rausness@uky.edu

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Tort Liability for Asbestos Removal Costs

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Tort Liability for Asbestos Removal Costs

DURING the past twenty years, Congress and the general public have become increasingly aware of the health hazards caused by exposure to toxic substances. Consequently, Congress has enacted statutes, such as CERCLA,¹ requiring parties who are responsible for toxic waste to clean up the toxic waste sites and to reduce the level of toxic chemicals in the environment. Asbestos is one toxic substance that government has targeted in particular. The federal government and many states have enacted laws requiring asbestos-containing materials to be segregated or removed from schools and public buildings.²

Even when government regulations do not mandate specific abatement measures, building owners often feel obliged to take action on their own in order to avoid potential tort liability.³ Abatement procedures, however, are very expensive and existing levels of financial support from federal and state sources are not sufficient to defray these costs entirely.⁴

For this reason, school districts⁵ and other property owners⁶

* Ashland Oil Professor of Law, University of Kentucky College of Law. B.A., 1966, J.D., 1968, University of Florida; LL.M., 1973, Yale University.

¹ Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-75 (1989 & Supp. V 1993).

² Asbestos Hazard Emergency Response Act of 1986, 15 U.S.C. §§ 2641-56 (1988 & Supp. V 1993). See also Barbara M. Christensen & Kristine A. Larscheid, Note, *Asbestos Abatement: The Second Wave of the Asbestos Litigation Industry*, 27 WASHBURN L.J. 454, 460-65 (1988) (discussing federal legislation).

³ Lindley J. Brenza, Comment, *Asbestos in Schools and the Economic Loss Doctrine*, 54 U. CHI. L. REV. 277, 307 (1987) (suggesting that school officials sometimes undertake unnecessary abatement efforts because of public opinion or fear of litigation).

⁴ See *id.* at 282 (funding under federal asbestos abatement legislation is inadequate); James L. Connaughton, Comment, *Recovery for Risk Comes of Age: Asbestos in Schools and the Duty to Abate a Latent Environmental Hazard*, 83 NW. U. L. REV. 512, 515-16 (1989) (state asbestos abatement programs are grossly underfunded).

⁵ See, e.g., *Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp.*, 959 F.2d 868 (10th

seek through litigation to make suppliers of asbestos products pay for the removal and replacement of asbestos-containing materials in their buildings.⁷ The primary issue in these cases is whether asbestos abatement costs are a form of property damage or whether they are purely economic in character. This issue is critical because of the way tort and contract statutes of limitation operate.

The statute of limitation in a contract action runs from the time the sales contract is breached, usually the date of delivery.⁸ Often the statute of limitation has run before property owners are aware of the need to remove asbestos-containing material from their buildings.⁹ Although the statutes of limitation for tort actions are generally shorter, they often incorporate a "discovery rule" which tolls the running of the statutes of limitation until the

Cir. 1992); *Anderson County Bd. of Educ. v. National Gypsum Co.*, 821 F.2d 1230 (6th Cir. 1987); *Spartanburg County Sch. Dist. Seven v. National Gypsum Co.*, 805 F.2d 1148 (4th Cir. 1986); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. 286 (D. Minn. 1990); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410 (D.N.D. 1989); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866 (D.N.D. 1988); *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855 (D.N.J. 1982), *aff'd*, 882 F.2d 510 (3d Cir. 1989); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580 (Ill. 1989); *Independent Sch. Dist. No. 622 v. Keene Corp.*, 495 N.W.2d 244 (Minn. Ct. App. 1993), *aff'd in part and rev'd in part*, 511 N.W.2d 728 (Minn. 1994); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369 (S.C. 1990).

⁶ See *Concordia College Corp. v. W.R. Grace & Co.*, 999 F.2d 326 (8th Cir. 1993); *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975 (4th Cir. 1987); *City of Wichita v. United States Gypsum Co.*, 828 F. Supp. 851 (D. Kan. 1993); *T.H.S. Northstar Assocs. v. W.R. Grace & Co.*, 767 F. Supp. 969 (D. Minn. 1991); *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646 (D.R.I. 1986); *Celotex Corp. v. St. Joseph Hosp.*, 376 S.E.2d 880 (Ga. 1989); *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d 393 (Minn. 1992); *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179 (Wis. 1991).

⁷ In addition to individual suits, property owners have filed a number of class action suits against asbestos suppliers. See, e.g., *In re Asbestos Sch. Litig.*, 104 F.R.D. 422 (E.D. Pa. 1984), *modified*, 107 F.R.D. 215 (E.D. Pa. 1985) (voluntary class action certified and upheld in related cases); *Sisters of St. Mary v. AAER Sprayed Insulation*, 445 N.W.2d 723 (Wis. Ct. App. 1989) (denial of class certification affirmed). According to one commentator, twelve such class actions have been filed, but none has yet gone to trial. See Lester Brickman, *The Asbestos Litigation Crisis: Is There a Need for an Administrative Alternative?*, 13 CARDOZO L. REV. 1819, 1850 n.131 (1992).

⁸ U.C.C. § 2-725(2) (1992); see also Special Project, *Article Two Warranties in Commercial Transactions*, 64 CORNELL L. REV. 30, 270 (1978) [hereinafter *Article Two Warranties*].

⁹ See Brenza, *supra* note 3, at 284.

victim discovers or should discover the injury.¹⁰ Accordingly, property owners normally prefer to sue in tort to take advantage of the additional time allowed by the discovery rule.¹¹

In most jurisdictions, plaintiffs may sue in tort only if they suffer physical injury—either personal injury or physical damage to their property.¹² Asbestos suppliers maintain that abatement costs are wholly economic in nature and, therefore, not recoverable in a tort action. However, courts unwisely, but uniformly, have rejected this argument and allowed property owners to bring tort actions against asbestos manufacturers and suppliers by expanding the definition of physical injury to characterize abatement costs as property damage instead of economic harm.¹³

Part I of this Article identifies the health risks from exposure to asbestos-containing materials in schools and public buildings. Part II provides a brief overview of applicable contract and tort principles. Part III examines a number of recent asbestos abatement cases and critiques their reasoning. Finally, Part IV suggests that courts should apply a stricter definition of physical injury in toxic substance abatement cases than they have applied in asbestos abatement cases. Under this approach, physical damage to property would be defined as damage that occurs when the victim's property is physically destroyed or altered by direct

¹⁰ See Morris G. Shanker, *A Reexamination of Prosser's Products Liability Crossword Game: The Strict or Stricter Liability of Commercial Code Sales Warranty*, 29 CASE W. RES. L. REV. 550, 574-75 (1979).

¹¹ See, e.g., *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410, 1412 (D.N.D. 1989); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866, 870 (D.N.D. 1988); *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646, 652 (D.R.I. 1986); *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 290 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855, 858 (D.N.J. 1982), *aff'd*, 882 F.2d 510 (3d Cir. 1989).

¹² See Elizabeth A. Heiner, Note, *Sunnyslope Grading, Inc. v. Miller, Bradford & Risberg, Inc.: What Recovery for Economic Loss—Tort or Contract?*, 1990 WIS. L. REV. 1337, 1338-39.

¹³ See *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 978 (4th Cir. 1987); *City of Wichita v. United States Gypsum Co.*, 828 F. Supp. 851, 855 (D. Kan. 1993); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. at 1413; *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 870; *City of Manchester v. National Gypsum Co.*, 637 F. Supp. at 651-52; *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. at 859; *Board of Educ. v. A. C & S, Inc.*, 546 N.E.2d 580, 588 (Ill. 1989); *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d 393, 397 (Minn. 1992); *Independent Sch. Dist. No. 622 v. Keene Corp.*, 495 N.W.2d 244, 247 (Minn. Ct. App. 1993), *aff'd in part and rev'd in part*, 511 N.W.2d 728 (Minn. 1994); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369, 371 (S.C. 1990).

and immediate contact with a defective product. This definition would exclude property damage caused by slow deterioration of the plaintiff's property as well as expenses incurred to remove a potentially harmful product from the property. Thus, property owners would have to sue in contract, rather than in tort, to recover their abatement expenses. Limiting property owners to contract remedies is not only doctrinally sound, but is also consistent with the policies that distinguish tort from contract law.

I

THE ASBESTOS PROBLEM IN SCHOOLS AND PUBLIC BUILDINGS

Asbestos is the generic name for a large class of fibrous minerals.¹⁴ Chrysotile, crocidolite, amosite, anthophyllite, tremolite and actinolite are commercial varieties.¹⁵ These substances are fire-resistant, insulate well against heat and electricity, and have high tensile strength.¹⁶ Because of these characteristics, asbestos products have been widely used in cement products, acoustical plaster, fireproof textiles, ceiling tiles, vinyl floor tiles, and thermal insulation.¹⁷

Nonetheless, asbestos can be extremely dangerous. When inhaled or ingested, asbestos fibers remain in the lungs where they accumulate over time.¹⁸ Persons who are exposed to asbestos fibers risk death or serious illness from diseases such as asbestosis, mesothelioma and bronchogenic carcinoma.¹⁹ Asbestosis is a pulmonary fibrosis, an increase in the fibrous tissue in the lungs

¹⁴ See Special Project, *An Analysis of the Legal, Social, and Political Issues Raised by Asbestos Litigation*, 36 VAND. L. REV. 573, 578 (1983).

¹⁵ See Lee S. Siegel, Note, *As the Asbestos Crumbles: A Look at New Evidentiary Issues in Asbestos-Related Property Damage Litigations*, 20 HOFSTRA L. REV. 1139, 1149 (1992). Chrysotile is the most common type of asbestos used in building material. See Stephen V. Nielsen, Note, *The "Second Wave" of Asbestos Litigation (Property Damage): Who Writes the Check Now?*, 7 COOLEY L. REV. 491, 505 (1990).

¹⁶ See Brenza, *supra* note 3, at 279-80.

¹⁷ See Janis L. Kirkland, *What's Current in Asbestos Regulations*, 23 U. RICH. L. REV. 375, 377 (1989). As much as 30 million tons of asbestos may have been used in American buildings since 1900. See Patrick J. Hagan et al., *Totalling Up the Costs of Asbestos Litigation: Guess Who Will Pay the Price?*, 9 TEMP. ENVTL. L. & TECH. J., Spring 1990, at 1, 5.

¹⁸ Christensen & Larscheid, *supra* note 2, at 459.

¹⁹ Harry H. Wellington, *Asbestos: The Private Management of a Public Problem*, 33 CLEV. ST. L. REV. 375, 375-76 (1984-85); Jean A. O'Hare, Comment, *Asbestos Litigation: The Dust Has Yet to Settle*, 7 FORDHAM URB. L.J. 55, 58 (1978).

that is often fatal.²⁰ Malignant mesothelioma is a tumor of the membrane that lines the lungs, chest cavity and abdominal cavity. This disease is almost always fatal.²¹ Bronchogenic carcinoma, or lung cancer, is a particular risk for smokers who are exposed to asbestos.²² Typically, these diseases do not manifest themselves until ten to twenty years after exposure to asbestos fibers.²³ Furthermore, the presence of asbestos-containing materials is particularly serious for children because they appear to be more vulnerable than adults to asbestos-related diseases.²⁴

Products, such as roofing tiles, where asbestos fibers are embedded in some other solid material, do not pose much of a health threat as long as they are left in place.²⁵ "Friable" asbestos-containing products, on the other hand, are more of a problem. Friable materials are those that "can be crumbled, pulverized, or reduced to powder by hand pressure."²⁶ Such materials are often sprayed or troweled onto walls or ceilings for fireproofing, insulation, soundproofing or decorative purposes.²⁷ Friable materials are likely to release asbestos fibers when they are disturbed or damaged.²⁸

Enormous quantities of asbestos are present in schools and public buildings. It is estimated that more than 100,000 school buildings contain asbestos material in objects such as floor tile, transite board and fire doors.²⁹ In addition, according to a study

²⁰ See Gideon Mark, Comment, *Issues in Asbestos Litigation*, 34 HASTINGS L.J. 871, 873-74 (1983).

²¹ David Worthen, Note, *Asbestos Abatement (The Insurance Crisis): A Solution Is Still Up in the Ambient Air*, 38 SYRACUSE L. REV. 1343, 1349 (1987).

²² See John D. Ingram, *Insurance Coverage Problems in Latent Disease and Injury Cases*, 12 ENVTL. L. 317, 322 (1982).

²³ See Lori J. Khan, Comment, *Untangling the Insurance Fibers in Asbestos Litigation: Toward a National Solution to the Asbestos Injury Crisis*, 68 TUL. L. REV. 195, 199 (1993). Furthermore, once lung tissue is damaged, further deterioration will occur even in the absence of any additional exposure to asbestos. *Id.*

²⁴ Robert D. Lang, *Danger in the Classroom: Asbestos in the Public Schools*, 10 COLUM. J. ENVTL. L. 111, 113-14 (1985).

²⁵ Frank B. Cross, *Asbestos in Schools: A Remonstrance Against Panic*, 11 COLUM. J. ENVTL. L. 73, 75 (1986).

²⁶ Christensen & Larscheid, *supra* note 2, at 459.

²⁷ OFFICE OF PESTICIDES & TOXIC SUBSTANCES, U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA REP. NO. 560/5-83-002, GUIDANCE FOR CONTROLLING FRIABLE ASBESTOS-CONTAINING MATERIALS IN BUILDINGS 2-1 (March 1983).

²⁸ *Id.*; OFFICE OF PESTICIDES & TOXIC SUBSTANCES, U.S. ENVIRONMENTAL PROTECTION AGENCY, GUIDANCE FOR CONTROLLING ASBESTOS-CONTAINING MATERIALS IN BUILDINGS ¶ 1.1 (1985 ed.) [hereinafter 1985 EPA Report].

²⁹ Hagan et al., *supra* note 17, at 19.

conducted by the U.S. Environmental Protection Agency (EPA), about 45,000 schools contain friable asbestos-containing surfacing or insulation material.³⁰ Another study found that as many as 15 million children were exposed to asbestos in American schools.³¹ Furthermore, asbestos-containing material was found in approximately 733,000 public and commercial buildings.³² In about 317,000 of these buildings, the asbestos-containing material was sufficiently damaged to pose a risk to the health of building occupants.³³

In response to public concern about the health risks of asbestos in schools, Congress enacted the Asbestos Hazard Emergency Response Act of 1986.³⁴ This legislation directs the EPA to promulgate regulations to protect children against exposure to asbestos in their schools. Pursuant to this legislation, the EPA requires local education agencies to identify asbestos-containing materials in their buildings and to take appropriate actions to control the release of asbestos in schools.³⁵ In addition, some states have enacted statutes that regulate asbestos-containing material in schools or public buildings.³⁶

When friable asbestos-containing material is found in a building, some sort of abatement action is usually necessary to protect the health of the building occupants. Encapsulation, enclosure and removal are the leading abatement techniques.³⁷ Encapsulation involves spraying asbestos-containing material with a seal-

³⁰ See *Asbestos-Containing Materials in School*, 52 Fed. Reg. 41,826, 41,845 (1987).

³¹ See Lang, *supra* note 24, at 115.

³² 1985 EPA Report, *supra* note 28, at ¶ 1.1.

³³ Hagen et al., *supra* note 17, at 19 (citing U.S. ENVIRONMENTAL PROTECTION AGENCY, STUDY OF ASBESTOS-CONTAINING MATERIALS IN PUBLIC BUILDINGS, A REPORT TO CONGRESS, at 9 (Feb. 1988)).

³⁴ 15 U.S.C. §§ 2641-56 (1988 & Supp. V 1993).

³⁵ 40 C.F.R. §§ 763.80-.119 (1993).

³⁶ See, e.g., ALASKA STAT. §§ 18.31.010-.050 (Supp. 1993); CAL. HEALTH & SAFETY CODE §§ 25925-929 (West Supp. 1994); 105 ILL. ANN. STAT. Ch. 105, para. 1-16 (Smith-Hurd 1993 & Supp. 1994); KY. REV. STAT. ANN. §§ 224.20-300 to 320 (Michie/Bobbs-Merrill 1991 & Supp. 1992); LA. REV. STAT. ANN. §§ 30:2341-2345 (West 1989 & Supp. 1994); ME. REV. STAT. ANN. tit. 38, §§ 1271-84 (West Supp. 1993); MINN. STAT. ANN. §§ 326.70-81 (West Supp. 1994); MISS. CODE ANN. §§ 37-137-1 to 33 (1990 & Supp. 1993); N.H. REV. STAT. ANN. §§ 141-E:1 to E:19 (1990 & Supp. 1993); N.C. GEN. STAT. §§ 130A-444 to 451 (1993); OHIO REV. CODE ANN. §§ 3710.01-99 (Anderson 1992 & Supp. 1993); R.I. GEN. LAWS §§ 23-24.5-1 to -24 (1989 & Supp. 1993); VA. CODE ANN. §§ 2.1-526.12 to .17 (Michie 1987 & Supp. 1993).

³⁷ Christensen & Larscheid, *supra* note 2, at 458.

ant.³⁸ Enclosure means airtight walls are built around asbestos-containing materials.³⁹ However, the most reliable (and expensive) way to reduce asbestos-related health risks is to remove asbestos-containing material completely from the building.⁴⁰

The cost of removing asbestos from schools and public buildings is expected to exceed \$55 billion.⁴¹ Although schools may seek financial aid for this purpose under the provisions of the Asbestos School Hazard Abatement Act of 1984,⁴² this program is not sufficiently funded to pay for more than a small fraction of anticipated abatement costs.⁴³ Some states provide assistance to school districts for asbestos abatement costs, but these programs are often inadequately funded as well.⁴⁴ Private owners, of course, must pay for asbestos abatement out of their own pockets. Therefore, it is not surprising that public and private property owners are demanding compensation for abatement costs from asbestos suppliers.⁴⁵

II

RECOVERY FOR ECONOMIC HARM UNDER CONTRACT AND TORT LAW

Damage caused by a defective product can be either a physical or an economic harm. Physical injury or harm includes bodily harm to a user or consumer, as well as physical damage to property (other than the product itself), sustained as the result of an accident caused by a defective product.⁴⁶ Economic losses occur when a product fails to perform at its expected level.⁴⁷

Economic losses are classified traditionally as direct or indirect. "Loss of the value of the bargain" is one type of direct eco-

³⁸ 1985 EPA Report, *supra* note 28, at ¶ 5.1.3.

³⁹ *Id.* at ¶ 5.1.2.

⁴⁰ See Worthen, *supra* note 21, at 1347-48 n.37.

⁴¹ Hagan et al., *supra* note 17, at 2.

⁴² 20 U.S.C. §§ 4011-21 (1988 & Supp. V 1993).

⁴³ See Brenza, *supra* note 3, at 282.

⁴⁴ See *Asbestos in Schools: Hearing on H.R.J. Res. 153 Before the Subcomm. on Transp., Tourism, and Hazardous Materials of the Comm. on Energy and Commerce*, 100th Cong., 1st Sess. 20-21 (1987).

⁴⁵ See Hagan et al., *supra* note 17, at 2.

⁴⁶ See *Triple U Enterprises, Inc. v. New Hampshire Ins. Co.*, 576 F. Supp. 798, 806 (D.S.D. 1983), *modified*, 766 F.2d 1278 (8th Cir. 1985) (physical injury is defined as "bodily harm or hurt"); RESTATEMENT (SECOND) OF TORTS § 7 (1965) (physical harm means "physical impairment of the human body, or of land or chattels").

⁴⁷ Comment, *Manufacturers' Liability to Remote Purchasers for "Economic Loss" Damages—Tort or Contract?*, 114 U. PA. L. REV. 539, 541 (1966).

conomic loss. The loss is calculated by comparing the actual value of the product as delivered with its non-defective value.⁴⁸ Repair or replacement costs are also treated as direct economic losses.⁴⁹ Indirect economic losses include lost profits and loss of future business opportunities.⁵⁰

Consumers who suffer personal injuries or property damage can sue product sellers either in tort or under contract.⁵¹ However, in most jurisdictions, consumers who suffer only economic harm must rely exclusively on contract remedies.⁵² Unfortunately, recovery is often more difficult for these litigants.

A. Contract Law

1. Express and Implied Warranties

When a defective product causes economic or physical harm, the buyer may maintain an action for breach of express or implied warranties as provided in the Uniform Commercial Code (UCC).⁵³ Under the UCC, an action may lie if the seller (1) warranted that the goods sold shall conform to any affirmation of fact, or (2) expressly promised that the goods shall conform to any description of the goods or to any sample or model provided to the buyer if the description or sample is "part of the basis of the bargain."⁵⁴

In contrast, implied warranties arise by operation of law rather

⁴⁸ John E. Lynch, Jr., Note, *Recovery of Direct Economic Loss: The Unanswered Questions of Ohio Products Liability Law*, 27 CASE W. RES. L. REV. 683, 686 (1977).

⁴⁹ See Kimberly J. Tillman, Comment, *Product Defects Resulting in Pure Economic Loss: Under What Theory Can a Consumer Recover?*, 50 MO. L. REV. 625, 627 (1985).

⁵⁰ *Id.*

⁵¹ See generally Heiner, *supra* note 12, at 1337.

⁵² James Girman, Comment, *Economic Damages in a Products Liability Action: Where Do We Go From Here?*, 28 DUQ. L. REV. 745, 747 (1990).

⁵³ William R. Clement, Jr., Note, *Strict Liability and Warranty in Consumer Protection: The Broader Protection of the UCC in Cases Involving Economic Loss, Used Goods, and Nondangerous Defective Goods*, 39 WASH. & LEE L. REV. 1347, 1354 (1982); Lynch, *supra* note 48, at 718.

⁵⁴ U.C.C. § 2-313 (1992); see also Russell J. Weintraub, *Disclaimer of Warranties and Limitation of Damages for Breach of Warranty Under the UCC*, 53 TEX. L. REV. 60, 63 (1974).

Under the Code's predecessor, the Uniform Sales Act, a seller was not liable for breach of an express warranty unless the buyer specifically relied on the seller's promises or representations. The Uniform Commercial Code, however, does not mention reliance and merely requires that the seller's promises or representations become "part of the basis of the bargain." See John E. Murray, Jr., "Basis of the Bargain": *Transcending Classical Concepts*, 66 MINN. L. REV. 283, 284 (1982).

than by a seller's actions.⁵⁵ An implied warranty of merchantability allows potential purchasers to rely upon a merchant's implicit representations about the quality of the goods sold.⁵⁶ An implied warranty of merchantability ensures that the goods a "merchant"⁵⁷ sells are of average quality and fit for their ordinary purposes.⁵⁸

An implied warranty of fitness for particular purpose, on the other hand, ensures that a product will be suitable for any use that is peculiar to the buyer's special business needs.⁵⁹ For an implied warranty of fitness to arise, the seller must be aware of the particular purpose for which the goods are required and realize that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods.⁶⁰

Various types of damages may be recovered under the UCC for breach of warranty.⁶¹ The basic measure of damages is the difference between the value of the goods as accepted and their value as warranted.⁶² This is known as the diminution-in-value or loss of bargain approach.⁶³ Incidental damages, on the other hand, arise from expenses associated with rejection, revocation or cover.⁶⁴ These include "expenses reasonably incurred in in-

⁵⁵ See Kimberly J. Tillman, Comment, *Product Defects Resulting in Pure Economic Loss: Under What Theory Can a Consumer Recover?*, 50 Mo. L. Rev. 625, 629-30 (1986).

⁵⁶ See Richard E. Speidel, *Warranty Theory, Economic Loss and the Privity Requirement: Once More Into the Void*, 67 B.U. L. Rev. 9, 40-42 (1987).

⁵⁷ An implied warranty of merchantability will arise only if the seller is a "merchant with respect to goods of that kind." U.C.C. § 2-314(1) (1992). See Special Project, *Article Two Warranties in Commercial Transactions: An Update*, 72 CORNELL L. REV. 1159, 1192-93 (1987) [hereinafter *Update*].

The Code defines a merchant as:

a person who deals in goods of the kind or otherwise by his occupation holds himself out as having knowledge or skill peculiar to the practices or goods involved in the transaction or to whom such knowledge or skill may be attributed by his employment of an agent or broker or other intermediary who by his occupation holds himself out as having such knowledge or skill.

U.C.C. § 2-104(1) (1992).

⁵⁸ U.C.C. § 2-314(2)(b), (c) (1992).

⁵⁹ U.C.C. § 2-315 (1992).

⁶⁰ Weintraub, *supra* note 54, at 65.

⁶¹ See U.C.C. § 2-714(1) (1992) (losses determinable "in any manner which is reasonable").

⁶² U.C.C. § 2-714(2) (1992).

⁶³ See Lynch, *supra* note 48, at 686. Courts often use the cost of repair as a measure of damage when the goods can be brought into conformity with their warranties at a reasonable cost. See *Update*, *supra* note 57, at 1211.

⁶⁴ See *Article Two Warranties*, *supra* note 8, at 133.

spection, receipt, transportation and care" of nonconforming goods, as well as reasonable expenses incurred in connection with the purchase of substitute goods.⁶⁵ When a buyer has accepted and retained defective goods, incidental damages include "all losses beyond the diminution in value of the goods received."⁶⁶ In some instances, a seller may also be liable for consequential damages.⁶⁷ These include the cost of unsuccessful attempts to repair the warranted goods, investments made in reliance on seller's promises, increased production costs, lost profits and liability costs to third parties.⁶⁸ Under the UCC, a seller's liability for physical injuries is also treated as a consequential damage.⁶⁹

2. *Limitations on Recovery*

Although the warranty sections of the Code provide broad protection to purchasers of defective goods, other Code provisions allow the seller to limit the scope of warranties.⁷⁰

(a) *The Notice Requirement*

UCC § 2-607 bars suit unless the buyer gives reasonable notice to the seller that the goods are defective.⁷¹ This requirement is intended to give the seller a chance to inspect nonconforming goods and attempt to correct any deficiency. It also provides an opportunity for negotiation between the parties, and protects the seller against stale claims.⁷²

⁶⁵ U.C.C. § 2-715(1) (1992).

⁶⁶ See *Article Two Warranties*, *supra* note 8, at 140.

⁶⁷ *Id.* at 140-42.

⁶⁸ See Edwin V. Apel, Jr., Comment, *Strict Liability: Recovery of "Economic" Loss*, 13 IDAHO L. REV. 29, 40 (1976); Lynch, *supra* note 48, at 686-87.

⁶⁹ See *Update*, *supra* note 57, at 1236-37.

⁷⁰ See William K. Jones, *Product Defects Causing Commercial Loss: The Ascendancy of Contract over Tort*, 44 U. MIAMI L. REV. 731, 735-45 (1990).

⁷¹ U.C.C. § 2-607(3)(a) (1992). The Code does not mandate any particular form of notification. See George F. Hammond, Note, *Notification of Breach Under Uniform Commercial Code Section 2-607(3)(a): A Conflict, a Resolution*, 70 CORNELL L. REV. 525, 525-26 (1985). The timeliness of notice depends upon the commercial context of the transaction, the past conduct of the parties, and the discoverability of the defect. U.C.C. § 2-607(3) & cmt. 5. Apparently, the notice requirement applies only to an immediate buyer and does not apply to remote parties who may be injured by defective goods. U.C.C. § 2-607, cmt. 5.

⁷² See *Update*, *supra* note 57, at 1317-18.

(b) *Privity of Contract*

Privity describes the relationship between various parties to a contract. Only those who have directly contracted with another are in privity.⁷³ Commentators have identified several types of privity relationships. Horizontal privity describes the relationship between the seller and the ultimate user. If strict horizontal privity is required, the seller is liable only to the buyer and not to others who may use or consume the product.⁷⁴ Vertical privity describes the relationship between parties in the marketing chain. If vertical privity is required, only the immediate buyer can recover against a seller for breach of warranty.⁷⁵

The UCC defines three types of horizontal privity.⁷⁶ Alternative A extends a seller's warranty to "any natural person who is in the family or household of his buyer or who is a guest in his home" if the victim suffered a personal injury and could reasonably be expected to use, consume, or be affected by the goods.⁷⁷ Alternative B extends a seller's warranty not only to users or consumers, but also to any party who may reasonably be expected to be affected by the goods. However, both Alternative A and Alternative B are arguably limited to physical injuries, and therefore may not cover purely economic harm.⁷⁸ Alternative C, on the other hand, does not limit warranty protection to natural persons, nor does it include the "injured person" language.⁷⁹ Presumably, Alternative C would permit one who suffered foreseeable economic harm to recover against the seller for breach of warranty even in the absence of horizontal privity.

The UCC does not address whether vertical privity should be required in order for a buyer to recover against a remote seller for breach of warranty.⁸⁰ Most states do not require vertical privity when the buyer sues a remote seller for breach of an ex-

⁷³ See JAMES J. WHITE & ROBERT S. SUMMERS, *UNIFORM COMMERCIAL CODE* 456 (3d ed. 1988); *Update*, *supra* note 57, at 1310-11.

⁷⁴ See generally Heiner, *supra* note 12, at 1342-43.

⁷⁵ See Edward H. Rabin & Jill H. Grossmann, *Defective Products or Realty Causing Economic Loss: Toward a Unified Theory of Recovery*, 12 Sw. U. L. REV. 4, 15-16 (1981). A person who purchases a tool from a local hardware store and later tries to sue the manufacturer would not have vertical privity. See WHITE & SUMMERS, *supra* note 73, at 456.

⁷⁶ U.C.C. § 2-318 (1992).

⁷⁷ See WHITE & SUMMERS, *supra* note 73, at 457.

⁷⁸ *Id.* at 463.

⁷⁹ *Id.* at 464.

⁸⁰ See Tillman, *supra* note 49, at 636.

press warranty, at least where the buyer relies on the seller's representations of safety or quality.⁸¹ This rule seems to include economic injury.⁸² However, it is less clear whether vertical privity is required to sue for breach of an implied warranty. Although most jurisdictions have abandoned the vertical privity requirement for breach of an implied warranty in personal injury actions,⁸³ many still require vertical privity in cases of purely economic harm.⁸⁴

(c) *Disclaimers and Exclusions of Remedies*

A disclaimer is a clause in a contract that prevents a warranty from arising or limits its normal scope.⁸⁵ In contrast, a limitation or exclusion does not prevent a warranty from arising, but restricts the remedies available to the injured party if a breach occurs.⁸⁶ Although disclaimers and limitations serve the same function,⁸⁷ the UCC's procedures for disclaiming warranties differ substantially from those for limiting remedies.⁸⁸

Most courts do not allow a seller to disclaim an express warranty.⁸⁹ However, a seller can disclaim the implied warranties of

⁸¹ See *Voytovich v. Bangor Punta Operations, Inc.*, 494 F.2d 1208, 1211 (6th Cir. 1974) (applying Ohio law); *Indust-Ri-Chem Lab., Inc. v. Par-Pak Co.*, 602 S.W.2d 282, 287-88 (Tex. Ct. App. 1980).

⁸² See *Randy Knitwear, Inc. v. American Cyanamid Co.*, 181 N.E.2d 399, 403-04 (N.Y. 1962); *Kinlaw v. Long Mfg. N.C. Inc.*, 259 S.E.2d 552, 557 (N.C. 1979).

⁸³ See, e.g., *Roberts v. General Dynamics, Convair Corp.*, 425 F. Supp. 688, 691 (S.D. Tex. 1977); *Frericks v. General Motors Corp.*, 363 A.2d 460, 463 (Md. 1976); *Barker v. Allied Supermarket*, 596 P.2d 870, 875-76 (Okla. 1979).

⁸⁴ See *Wellcraft Marine v. Zarzour*, 577 So. 2d 414, 419 (Ala. 1990); *Flory v. Silvercrest Indus., Inc.*, 633 P.2d 383, 388 (Ariz. 1981); *Nebraska Innkeepers, Inc. v. Pittsburgh-Des Moines Corp.*, 345 N.W.2d 124, 129 (Iowa 1984); *Professional Lens Plan, Inc. v. Polaris Leasing Co.*, 675 P.2d 887, 898 (Kan. 1984). However, other courts allow consumers who have suffered a direct economic injury to recover against a remote seller or manufacturer. See *Spring Motors Distrib., Inc. v. Ford Motor Co.*, 489 A.2d 660, 663 (N.J. 1985) (remote supplier); *Waggoner v. Town & Country Mobile Homes, Inc.*, 808 P.2d 649, 652 (Okla. 1990) (remote manufacturer); *Gasque v. Eagle Mach. Co.*, 243 S.E.2d 831, 832 (S.C. 1978) (remote manufacturer); *Western Equip. Co. v. Sheridan Iron Works, Inc.*, 605 P.2d 806, 810 (Wyo. 1980) (remote manufacturer).

⁸⁵ See *Article Two Warranties*, *supra* note 8, at 212.

⁸⁶ See *Update*, *supra* note 57, at 1289.

⁸⁷ See Note, *Legal Control on Warranty Liability Limitation Under the Uniform Commercial Code*, 63 VA. L. REV. 791, 797 (1977).

⁸⁸ See *Update*, *supra* note 57, at 1289.

⁸⁹ See, e.g., *Northern States Power Co. v. ITT Meyer Indus.*, 777 F.2d 405, 412 (8th Cir. 1985); *Consolidated Data Terminals v. Applied Digital Data Sys., Inc.*, 708 F.2d 385, 391 (9th Cir. 1983).

merchantability and fitness.⁹⁰ A disclaimer of the implied warranty of merchantability must mention merchantability and, if written, must be conspicuous.⁹¹ A disclaimer of an implied warranty of fitness must be in writing and conspicuous.⁹² Alternatively, a seller can disclaim implied warranties by stating "as is" or "with all faults" in the contract.⁹³ In addition, if the buyer could have discovered the defect by inspecting the goods, he cannot recover for breach of an implied warranty if he examined the goods as fully as he desired or refused to examine the goods.⁹⁴ Finally, implied warranties may be excluded or modified by course of dealing or performance, or by trade usage.⁹⁵

A seller may contractually limit liability for economic losses or property damage caused by a defective product;⁹⁶ he may limit remedies for breach of an express or implied warranty as long as it does not effectively deprive the buyer of the substantial value of his bargain.⁹⁷ For example, the parties may agree to set liability "either at a specified amount approximating foreseeable injury . . . or at a restitutionary level, by promising return of the purchase price."⁹⁸ The parties may also limit the remedy for breach of an implied warranty to the cost of repair or replacement of the defective product,⁹⁹ and can contractually exclude consequential damages except in cases of personal injuries.¹⁰⁰

(d) *Statutes of Limitation*

A cause of action accrues when a breach of contract occurs.¹⁰¹ This is normally at the time the seller tenders the goods for deliv-

⁹⁰ U.C.C. § 2-316(2) (1992).

⁹¹ *Id.*

⁹² *Id.*

⁹³ U.C.C. § 2-316(3)(a) (1992).

⁹⁴ U.C.C. § 2-316(3)(b) (1992). However, "[t]he buyer's examination of the goods will not exclude an express warranty." Weintraub, *supra* note 54, at 68.

⁹⁵ U.C.C. § 2-316(3)(c) (1992).

⁹⁶ See, e.g., *Kleven v. Geigy Agric. Chem.*, 227 N.W.2d 566, 571-72 (Minn. 1975); *Orr Chevrolet, Inc. v. Courtney*, 488 S.W.2d 883, 886-87 (Tex. Ct. App. 1972).

⁹⁷ U.C.C. §§ 2-718, 2-719 (1992). If a limited remedy fails to ensure that the buyer receives what the seller promised, it has failed to achieve its essential purpose. See Clement, *supra* note 53, at 1361-62.

⁹⁸ Ellen A. Peters, *Remedies for Breach of Contract Relating to the Sale of Goods Under the Uniform Commercial Code: A Roadmap for Article Two*, 73 YALE L.J. 199, 283 (1963).

⁹⁹ See Jonathan A. Eddy, *On the "Essential" Purposes of Limited Remedies: The Metaphysics of UCC section 2-719(2)*, 65 CAL. L. REV. 28, 61 (1977).

¹⁰⁰ U.C.C. § 2-719(3).

¹⁰¹ U.C.C. § 2-725(2) (1992).

ery.¹⁰² A buyer ordinarily has four years from the time the cause of action accrues to commence litigation,¹⁰³ unless the warranty explicitly extends to future performance of the goods, in which case the limitations period begins to run when the breach is discovered or should have been discovered.¹⁰⁴ Therefore, in most cases the buyer will have no cause of action if the injury occurs more than four years after the date of delivery.¹⁰⁵

B. Tort Law

In addition to suing for breach of warranty, consumers may seek to recover in tort against sellers of defective products under negligence or strict products liability. Tort law principles are often more favorable to consumers than those of contract law.¹⁰⁶ For example, neither vertical nor horizontal privity is required under tort law.¹⁰⁷ Moreover, sellers ordinarily cannot avoid tort liability through the use of disclaimers or limitations of remedies,¹⁰⁸ and statutes of limitation are more favorable to plaintiffs in tort than in contract actions. A contract's statute of limitation begins to run at the time of sale, regardless of the aggrieved party's lack of knowledge of the product defect.¹⁰⁹ In contrast, statutes of limitation under tort law do not begin to run until the injury is discovered or should have been discovered by the victim.¹¹⁰

¹⁰² See *Article Two Warranties*, *supra* note 8, at 270.

¹⁰³ U.C.C. § 2-725(1) (1992). The parties may shorten the four-year statutory period in their original agreement, but they cannot extend it. See *Update*, *supra* note 57, at 1327.

¹⁰⁴ U.C.C. § 2-725(2); see *Update*, *supra* note 57, at 1326-27.

¹⁰⁵ See Gary T. Schwartz, *Economic Loss in American Tort Law: The Examples of J'Aire and of Products Liability*, 23 SAN DIEGO L. REV. 37, 65-68 (1986).

¹⁰⁶ See Mark A. Kaprelian, Note, *Privity Revisited: Tort Recovery by a Commercial Buyer for a Defective Product's Self-Inflicted Damage*, 84 MICH. L. REV. 517, 520 (1985).

¹⁰⁷ See Speidel, *supra* note 56, at 20-21.

¹⁰⁸ See *Stern Aero AB v. Paige Airmotive, Inc.*, 499 F.2d 709, 713-14 (10th Cir. 1974); *Vandermark v. Ford Motor Co.*, 391 P.2d 168, 172 (Cal. 1964); *Thompson v. Nebraska Mobile Homes Corp.*, 647 P.2d 334, 338 (Mont. 1982); *Turner v. International Harvester Co.*, 336 A.2d 62, 70-71 (N.J. Super. Ct. App. Div. 1975).

¹⁰⁹ U.C.C. § 2-725(2).

¹¹⁰ See *Shanker*, *supra* note 10, at 574-75. However, tort claims may be barred by statutes of repose even though they satisfy the requirements of the discovery rule. See *Concordia College Corp. v. W.R. Grace & Co.*, 999 F.2d 326, 332 (8th Cir. 1993); see also *School Dist. No. 1J Multnomah County v. A, C & S, Inc.*, 5 F.3d 1255, 1258-60 (9th Cir. 1993) (statute of repose bars tort action against installer of asbestos but not against manufacturer).

1. Negligence

To recover in a negligence action, the plaintiff must show that the defendant failed to exercise due care in the manufacture or distribution of the product.¹¹¹ Although any member of the distributive chain may be sued,¹¹² usually only the manufacturer has sufficient control over the product to be found negligent.¹¹³ Liability may be based on failure to inspect for manufacturing flaws,¹¹⁴ negligent design,¹¹⁵ or failure to provide adequate instructions or warnings.¹¹⁶ Proving negligence may be difficult, especially where manufacturing defects are involved. However, courts frequently alleviate this burden somewhat by allowing plaintiffs to rely on the doctrine of *res ipsa loquitur*.¹¹⁷

In addition to proving that the manufacturer failed to exercise due care, the plaintiff must establish that the product was in a defective condition when it left the manufacturer's control, and that the alleged defect actually caused his injury.¹¹⁸ A common issue is whether the alleged product defect actually caused the plaintiff's injury or whether the injury resulted from some other unrelated cause. In most cases, courts require only a minimal showing of causation in order to send the issue to the jury.¹¹⁹

¹¹¹ See generally Dix W. Noel, *Manufacturers' Liability for Negligence*, 33 TENN. L. REV. 444, 453 (1966).

¹¹² The requirement of privity of contract in negligence actions was rejected in *MacPherson v. Buick Motor Co.*, 111 N.E. 1050, 1053 (N.Y. 1916). *MacPherson* is now accepted in almost every American jurisdiction. See William L. Prosser, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099, 1100-02 (1960).

¹¹³ Intermediaries, such as wholesalers or retailers, normally have no ability to test or inspect a product, especially if it is sold in a sealed container. See *Kratz v. American Stores Co.*, 59 A.2d 138, 139 (Pa. 1948); *Ringstad v. I. Magnin & Co.*, 239 P.2d 848, 849 (Wash. 1952).

¹¹⁴ See, e.g., *Nevels v. Ford Motor Co.*, 439 F.2d 251, 255 (5th Cir. 1971); *Ford Motor Co. v. Zahn*, 265 F.2d 729, 731 (8th Cir. 1959).

¹¹⁵ See, e.g., *Chown v. USM Corp.*, 297 N.W.2d 218, 220 (Iowa 1980); *Lindenberg v. Folsom*, 138 N.W.2d 573, 582 (N.D. 1965).

¹¹⁶ See, e.g., *Boyl v. California Chem. Co.*, 221 F. Supp. 669, 674-75 (D. Or. 1963); *Moran v. Faberge, Inc.*, 332 A.2d 11, 15 (Md. 1975).

¹¹⁷ See, e.g., *Escola v. Coca Cola Bottling Co.*, 150 P.2d 436, 439 (Cal. 1944); *Bornstein v. Metropolitan Bottling Co.*, 139 A.2d 404, 410 (N.J. 1958); *Parrillo v. Giroux Co.*, 426 A.2d 1313, 1320 (R.I. 1981).

¹¹⁸ See Prosser, *supra* note 112, at 1114.

¹¹⁹ See *Jenkins v. General Motors Corp.*, 446 F.2d 377, 380-81 (5th Cir. 1971) (issue whether allegedly defective automobile suspension system caused accident was properly submitted to the jury); *Hupp Motor Car Corp. v. Wadsworth*, 113 F.2d 827, 828-29 (6th Cir. 1940) (issue whether allegedly defective automobile steering gear or punctured tire caused accident was for the jury to decide).

The manufacturer may claim that the plaintiff or some other third party is responsible for the product's condition. In such cases, courts often allow the case to go to the jury pursuant to an instruction on *res ipsa loquitur*.¹²⁰

2. *Strict Products Liability*

The origin of strict products liability can be traced to *Greenman v. Yuba Power Products, Inc.*¹²¹ The plaintiff in *Greenman* was injured while using a power lathe that his wife purchased for him. The plaintiff brought suit against the product manufacturer, alleging breach of express warranty.¹²² The manufacturer contended that the suit was barred because the plaintiff failed to comply with the notice provisions of the Uniform Sales Act.¹²³ However, in an opinion written by Justice Roger Traynor, the California Supreme Court held that the Uniform Sales Act's notice requirements were inapplicable to personal injury actions against product manufacturers who were not in privity with the ultimate user or consumer.¹²⁴ Furthermore, the court declared that recovery by an injured consumer should not depend upon the "intricacies of the law of sales," and proposed instead that products liability be based on principles of strict liability in tort.¹²⁵ According to the *Greenman* court, the purpose of such liability was to ensure that costs of injuries from defective products be borne by the manufacturer who put such products into the market and not by injured consumers who were unable to protect themselves against product-related risks.¹²⁶

Virtually every jurisdiction now recognizes strict liability, and it has become the preferred theory in products liability litigation.¹²⁷ The essential principles of strict products liability are set

¹²⁰ See *Hokestad v. Coca-Cola Bottling Co.*, 180 N.W.2d 860, 865-66 (Minn. 1970) (issue whether soft drink carton was defective when it left defendant's bottling plant was properly submitted to the jury under a *res ipsa loquitur* instruction); *Honea v. Coca-Cola Bottling Co.*, 183 S.W.2d 968, 970-71 (Tex. 1944) (soft drink bottler who presented no evidence of subsequent mishandling was properly found negligent under theory of *res ipsa loquitur*).

¹²¹ 377 P.2d 897 (Cal. 1962).

¹²² *Id.* at 898-99.

¹²³ *Id.* at 899.

¹²⁴ *Id.* at 900.

¹²⁵ *Id.* at 901 (quoting *Ketterer v. Armour & Co.*, 200 F. 322 (S.D.N.Y. 1912)).

¹²⁶ *Greenman v. Yuba Power Products, Inc.*, 377 P.2d 897, 901 (Cal. 1962).

¹²⁷ See Barbara L. Atwell, *Products Liability and Preemption: A Judicial Framework*, 39 BUFF. L. REV. 181, 194 (1991).

forth in section 402A of the Restatement (Second) of Torts.¹²⁸ According to the Restatement, commercial product sellers are liable, regardless of fault, to consumers for any personal injuries or property damage caused by products that are defective and unreasonably dangerous.¹²⁹ All parties in the distributive chain, including manufacturers, wholesalers and retail sellers, are potentially liable to an injured consumer.¹³⁰

However, strict liability is not absolute liability,¹³¹ nor does it require sellers to insure against every product-related injury.¹³² A seller is liable only if the product is defective.¹³³ A product may be defectively manufactured because of some flaw in the production process;¹³⁴ it may be defectively designed if every unit in the product line has the same dangerous characteristic;¹³⁵ or it may be defective if the seller fails to provide adequate in-

¹²⁸ RESTATEMENT (SECOND) OF TORTS § 402A (1965).

¹²⁹ For strict liability to apply, section 402A requires that a product be both defective and unreasonably dangerous. See RESTATEMENT (SECOND) OF TORTS §402A cmt. i. Many jurisdictions still adhere to this position. See Atwell, *supra* note 127, at 195; David A. Fischer, *Products Liability—The Meaning of Defect*, 39 MO. L. REV. 339, 342 (1974). However, a number of courts no longer require plaintiffs to prove that a product was “unreasonably dangerous” as a separate element of their prima facie case. See *Butaud v. Suburban Marine & Sporting Goods, Inc.*, 543 P.2d 209, 214 (Alaska 1975), *modified*, 555 P.2d 42 (Alaska 1976); *Cronin v. J.B.E. Olson Corp.*, 501 P.2d 1153, 1161-62 (Cal. 1972); *Boudreau v. General Elec. Co.*, 625 P.2d 384, 389 (Haw. Ct. App. 1981); *Suter v. San Angelo Foundry & Mach. Co.*, 406 A.2d 140, 153 (N.J. 1979); *Azzarello v. Black Bros. Co.*, 391 A.2d 1020, 1025 (Pa. 1978).

¹³⁰ RESTATEMENT (SECOND) OF TORTS § 402A cmt. f.

¹³¹ See *Brown v. Sears, Roebuck & Co.*, 667 P.2d 750, 754 (Ariz. Ct. App. 1983) (“Strict liability . . . cannot be equated with absolute liability.”); *Vineyard v. Empire Mach. Co.*, 581 P.2d 1152, 1154 (Ariz. Ct. App. 1978) (“[S]trict liability is not synonymous with absolute liability.”); *Kaneko v. Hilo Coast Processing*, 654 P.2d 343, 353 (Haw. 1982) (“Strict products liability was never intended to be ‘absolute liability.’”); *Prentis v. Yale Mfg. Co.*, 365 N.W.2d 176, 181 (Mich. 1984) (“[Courts] have never gone so far as to make sellers . . . absolutely liable for any and all injuries sustained from the use of those products.”); *Bellotte v. Zayre Corp.*, 352 A.2d 723, 724 (N.H. 1976) (“Sellers are not . . . subject to absolute liability.”); *Willamette Essential Oils, Inc. v. Herrold & Jensen Implement Co.*, 683 P.2d 1374, 1378 (Or. Ct. App. 1984) (“Strict liability is not absolute liability.”); *Shawver v. Roberts Corp.*, 280 N.W.2d 226, 231 (Wis. 1979) (“Strict liability does not . . . impose absolute liability.”).

¹³² See *Gray v. Manitowac Co.*, 771 F.2d 866, 868-69 (5th Cir. 1985); *Laney v. Coleman Co.*, 758 F.2d 1299, 1302 (8th Cir. 1985); *Giordano v. Ford Motor Co.*, 299 S.E.2d 897, 899 (Ga. Ct. App. 1983); *Coney v. J.L.G. Indus., Inc.*, 454 N.E.2d 197, 200 (Ill. 1983); *Hunt v. Blasius*, 384 N.E.2d 368, 372 (Ill. 1978).

¹³³ See RESTATEMENT (SECOND) OF TORTS § 402A cmt. i.

¹³⁴ See, e.g., *Pennsylvania Glass Sand Corp. v. Caterpillar Tractor Co.*, 652 F.2d 1165 (3d Cir. 1981); *Landtis v. Astec Indus., Inc.*, 648 F.2d 1118 (7th Cir. 1981).

¹³⁵ See, e.g., *Barker v. Lull Eng'g Co.*, 573 P.2d 443 (Cal. 1982); *O'Brien v. Muskin Corp.*, 463 A.2d 298 (N.J. 1983).

structions or warnings.¹³⁶

3. *The "Economic Loss" Doctrine*

While all American jurisdictions allow injured consumers to recover in tort for personal injuries and physical damage to property, they differ with respect to the scope of tort remedies for purely economic harm. A few courts allow recovery in any situation. Other courts use a "type of consumer" rule to permit ordinary consumers, but not commercial buyers, to sue in tort. Most courts, however, purport to apply a "physical injury" requirement that excludes all recovery in tort for economic harm.

(a) *The Santor Rule*

In *Santor v. A. & M. Karagheusian, Inc.*,¹³⁷ the New Jersey Supreme Court found no distinction between physical injury and economic loss, thereby permitting product users to recover in tort for either type of damage.¹³⁸ Other courts have followed *Santor*.¹³⁹ The *Santor* court argued that strict liability is justified, regardless of the type of harm actually suffered, whenever a product fails to meet express or implied representations of quality made by the seller.¹⁴⁰ This rationale is similar to the representational theory of liability that supports recovery under implied warranty.¹⁴¹

(b) *The "Type of Consumer" Rule*

Other courts allow individual consumers to recover in tort for physical injury and economic harm. Commercial buyers, however, must sue for breach of warranty when they suffer economic loss.¹⁴² Courts that follow this "type of consumer" approach be-

¹³⁶ See, e.g., *Brochu v. Ortho Pharmaceutical Corp.*, 642 F.2d 652 (1st Cir. 1981); *Feldman v. Lederle Labs.*, 479 A.2d 374 (N.J. 1984).

¹³⁷ *Santor v. A. & M. Karagheusian, Inc.*, 207 A.2d 305 (N.J. 1965).

¹³⁸ The New Jersey court later qualified its holding in *Santor*. See *Spring Motors Distribs., Inc. v. Ford Motor Co.*, 489 A.2d 660 (N.J. 1985).

¹³⁹ See *Mead Corp. v. Allendale Mut. Ins. Co.*, 465 F. Supp. 355, 366 (N.D. Ohio 1979); *Santor v. A. & M. Karagheusian, Inc.*, 207 A.2d at 311; *Iacono v. Anderson Concrete Corp.*, 326 N.E.2d 267, 270-71 (Ohio 1975); *Berg v. General Motors Corp.*, 555 P.2d 818, 822-23 (Wash. 1976); *City of LaCrosse v. Schubert, Schroeder & Assoc.*, 240 N.W.2d 124, 127 (Wis. 1976).

¹⁴⁰ *Santor v. A. & M. Karagheusian, Inc.*, 207 A.2d at 312-13.

¹⁴¹ See *Speidel*, *supra* note 56, at 42 (discussing the rationale for the implied warranty of merchantability).

¹⁴² See *Cova v. Harley Davidson Motor Co.*, 182 N.W.2d 800, 804 (Mich. Ct. App.

lieve that contract law should apply when the parties have relatively equal bargaining power.¹⁴³ These courts also assume that ordinary consumers do not have the expertise to accurately assess economic risks, and that they do not have sufficient economic strength to protect themselves against economic loss through the bargaining process.¹⁴⁴ Commercial purchasers, on the other hand, are thought to have sufficient expertise to ascertain the nature and magnitude of potential economic losses,¹⁴⁵ and can allocate these risks efficiently through the bargaining process and pricing of goods.¹⁴⁶

(c) *The "Physical Injury" Rule*

In a majority of states, consumers may recover under strict liability only when they sustain "physical injury,"¹⁴⁷ which includes personal injuries or direct physical damage to a consumer's property.¹⁴⁸ Most courts apply the "physical injury" requirement to negligence claims as well.¹⁴⁹ *Seely v. White Motor Co.*¹⁵⁰ is the

1970); *Hapka v. Paquin Farms*, 458 N.W.2d 683, 687-88 (Minn. 1990); *Spring Motors Distribs., Inc. v. Ford Motor Co.*, 489 A.2d 660, 670-71 (N.J. 1985).

¹⁴³ See Marc A. Franklin, *When Worlds Collide: Liability Theories and Disclaimers in Defective-Product Cases*, 18 STAN. L. REV. 974, 989 (1966); Arnold G. Rubin, Note, *Products Liability: Expanding the Property Damage Exception in Pure Economic Loss Cases*, 54 CHI.-KENT L. REV. 963, 976 (1978).

¹⁴⁴ See *Seely v. White Motor Co.*, 403 P.2d 145, 156-57 (Cal. 1965) (Peters, J., dissenting).

¹⁴⁵ See *Spring Motors Distribs., Inc. v. Ford Motor Co.*, 489 A.2d at 670-71; Terrence A. Turner, Comment, *The Vexing Problem of the Purely Economic Loss in Products Liability: An Injury in Search of a Remedy*, 4 SETON HALL L. REV. 145, 179 (1972).

¹⁴⁶ See Cathy Bellehumeur, Comment, *Recovery for Economic Loss Under a Products Liability Theory: From the Beginning Through the Current Trend*, 70 MARQ. L. REV. 320, 329 (1987).

¹⁴⁷ See, e.g., *2000 Watermark Ass'n v. Celotex Corp.*, 784 F.2d 1183, 1187 (4th Cir. 1986); *Sanco, Inc. v. Ford Motor Co.*, 771 F.2d 1081, 1086 (7th Cir. 1985); *Colonial Park Country Club v. Joan of Arc*, 746 F.2d 1425, 1428-29 (10th Cir. 1984); *Purvis v. Consolidated Energy Prod. Co.*, 674 F.2d 217, 222-23 (4th Cir. 1982); *Morrow v. New Moon Homes, Inc.*, 548 P.2d 279, 285-86 (Alaska 1976); *Seely v. White Motor Co.*, 403 P.2d at 150-52; *Florida Power & Light Co. v. Westinghouse Elec. Co.*, 510 So. 2d 899, 902 (Fla. 1987); *Waggoner v. Town & Country Mobile Homes, Inc.*, 808 P.2d 649, 653 (Okla. 1990); *Sunnyslope Grading, Inc. v. Miller, Bradford & Risberg, Inc.*, 437 N.W.2d 213, 217-18 (Wis. 1989). However, plaintiffs who suffer personal injuries or property damage can usually also recover for economic losses in the same action. See Heiner, *supra* note 12, at 1338.

¹⁴⁸ The source of this argument is Restatement (Second) of Torts § 402A(1) which provides: "One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property . . ."

¹⁴⁹ See, e.g., *Sanco, Inc. v. Ford Motor Co.*, 771 F.2d 1081, 1084-85 (7th Cir. 1985)

seminal case on the "physical injury" requirement. The *Seely* court declared that personal injuries and property damage could best be compensated by tort law, but that sales law was better suited to govern economic relations between buyers and sellers.¹⁵¹ For this reason, the court refused to displace the U.C.C.'s existing system of sales warranties.¹⁵² The court also stated that subjecting manufacturers to tort liability for economic harm would be inefficient because they could not easily design their products to meet the individualized needs of numerous remote users.¹⁵³ Thus, the *Seely* court concluded that tort liability was undesirable because it would shift the costs of product disappointment from the contracting parties to all users of the product.¹⁵⁴

4. *The Economic Loss Doctrine and Property Damage*

Even though most courts acknowledge that there is a theoretical difference between economic loss and physical injury, they often find it difficult to classify a particular injury as one or the other. This is particularly the case when a defective product causes no personal injuries, but merely damages the plaintiff's property in some way.

(a) *Collateral Property Damage*

Collateral property means real or personal property other than the defective product itself.¹⁵⁵ In most jurisdictions, injured consumers can recover for physical harm to collateral property

(stating that a seller is liable for physical harm thereby caused to the ultimate user or consumer, or to his property); *Consolidated Edison Co. v. Westinghouse Elec. Corp.*, 567 F. Supp. 358, 365 (S.D.N.Y. 1983); *County of Westchester v. General Motors Corp.*, 555 F. Supp. 290, 292 (S.D.N.Y. 1983); *Casa Clara Condominium Ass'n v. Charley Toppino & Sons, Inc.*, 620 So. 2d 1244, 1246 (Fla. 1993); *Moorman Mfg. Co. v. National Tank Co.*, 435 N.E.2d 443, 451 (Ill. 1982); *Marcil v. John Deere Indus. Equip. Co.*, 403 N.E.2d 430, 434 (Mass. App. Ct. 1980); *A.C. Hoyle Co. v. Sperry Rand Corp.*, 340 N.W.2d 326, 328 (Mich. Ct. App. 1983).

¹⁵⁰ *Seely v. White Motor Co.*, 403 P.2d 145 (Cal. 1965).

¹⁵¹ *Id.* at 149-50; see also Sarah B. Porter, Note, *Economic Loss in Products Liability: Strict Liability or the Uniform Commercial Code?* *Spring Motors Distributors, Inc. v. Ford Motor Co.*, 28 B.C. L. REV. 383 (1987).

¹⁵² *Seely v. White Motor Co.*, 403 P.2d at 150-51; see also David B. Gaebler, *Negligence, Economic Loss and the U.C.C.*, 61 IND. L.J. 593, 624-25 (1986).

¹⁵³ *Seely v. White Motor Co.*, 403 P.2d at 150.

¹⁵⁴ *Seely v. White Motor Co.*, 403 P.2d at 151; see also Lynch, *supra* note 48, at 692.

¹⁵⁵ See Apel, *supra* note 68, at 40.

under negligence or strict products liability theories.¹⁵⁶ The rationale for allowing compensation for collateral property damage is to promote the same safety and risk-spreading goals as compensation for personal injuries.¹⁵⁷ Moreover, because the same forces that cause collateral property damage often also cause personal injuries, it makes sense to compensate both types of injury in the same legal proceeding.¹⁵⁸

(b) Damage to the Product Itself

There is less agreement, however, about whether damage to the product itself should be recoverable in tort.¹⁵⁹ A few courts permit victims to recover in tort for damage to the product in all cases.¹⁶⁰ These courts believe that property damage, even to the product itself, is distinguishable from the consequences of a product's failure to perform as the buyer expects.¹⁶¹

Other courts look at the nature of the defect and the manner in which the damage occurred before allowing a plaintiff to recover for damage to the product.¹⁶² An inquiry into the nature of the defect examines whether the product exposes the consumer to physical danger. The underlying rationale for this inquiry is that when a product creates a risk of personal injury, liability should not depend on whether or not the victim is actu-

¹⁵⁶ See David E. Bland & Robert M. Wattson, *Property Damage Caused by Defective Products: What Losses Are Recoverable?*, 9 WM. MITCHELL L. REV. 1, 18 (1983).

¹⁵⁷ See Joseph E. Linehan, Note, *The Recovery of Economic Loss Damages in Tort: Pennsylvania Law and "Social Adjustment,"* 51 U. PITT. L. REV. 203, 228-29 (1989).

¹⁵⁸ See Turner, *supra* note 145, at 154.

¹⁵⁹ Compare Linehan, *supra* note 157, at 230-31 (U.C.C. better suited than tort law to remedy loss from damage to the product itself) with Bellehumeur, *supra* note 146, at 349 (endangered plaintiff should be able to recover under tort law even when the product damages only itself).

¹⁶⁰ See Rocky Mt. Fire & Casualty Co. v. Biddulph Oldsmobile, 640 P.2d 851, 855 (Ariz. 1982). Other courts permit recovery for damage to the product itself if other property is also damaged. See Two Rivers Co. v. Curtiss Breeding Serv., 624 F.2d 1242, 1247 (5th Cir. 1980); Signal Oil & Gas Co. v. Universal Oil Prod., 572 S.W.2d 320, 325 (Tex. 1978).

¹⁶¹ Rocky Mt. Fire & Casualty Co. v. Biddulph Oldsmobile, 640 P.2d at 855.

¹⁶² See Northern Power & Eng'g Corp. v. Caterpillar Tractor Co., 623 P.2d 324, 329 (Alaska 1981); Salt River Project Agric. Improvement & Power Dist. v. Westinghouse Elec. Corp., 694 P.2d 198, 210-11 (Ariz. 1984); Arrow Leasing Corp. v. Cummins Ariz. Diesel, Inc., 666 P.2d 544, 548 (Ariz. Ct. App. 1983); Vulcan Materials Co. v. Driltech, Inc., 306 S.E.2d 253, 257 (Ga. 1983); Moorman Mfg. Co. v. National Tank Co., 435 N.E.2d 443, 450 (Ill. 1982); Bagel v. American Honda Motor Co., 477 N.E.2d 54, 57-58 (Ill. App. Ct. 1985); Russell v. Ford Motor Co., 281 Or. 587, 595, 575 P.2d 1383, 1387 (Or. 1978).

ally injured.¹⁶³ The manner in which the harm occurs is also relevant.¹⁶⁴ A number of courts maintain that sudden and violent accidents, which subject consumers to an immediate risk of physical injury, should be actionable in tort, while damage from slow deterioration should be actionable only under contract law.¹⁶⁵

The majority of courts, however, treat all types of damage to the product as an economic loss, and therefore deny recovery in tort.¹⁶⁶ *East River Steamship Corp. v. Transamerica Delaval, Inc.*,¹⁶⁷ decided by the United States Supreme Court in 1986, is the leading authority for this position. In *East River*, the lessors of four supertankers sued the manufacturer of the ships' turbine engines in tort to recover for economic losses caused by failure of the turbines. The lower courts held in favor of the defendant.¹⁶⁸ On appeal, the Supreme Court held injury to the product itself is an economic loss, even when the harm occurs through an abrupt, accident-like event.¹⁶⁹ The Court reasoned that damage to the product meant that the product had not met the buyer's expectations.¹⁷⁰ The Court declared that contract law was well suited to deal with this sort of controversy because the parties could allocate the risk of product disappointment through the bargaining process.¹⁷¹

Furthermore, the Court observed that neither product safety

¹⁶³ See Kaprelian, *supra* note 106, at 522. The "type of risk" approach is often invoked in cases where a defective product injures itself. See, e.g., *Cloud v. Kit Mfg. Co.*, 563 P.2d 248, 251 (Alaska 1977) (tort recovery may be allowed for mobile home destroyed by fire); *Vulcan Materials Co. v. Driltech*, 306 S.E.2d at 257 (tort recovery allowed for drilling machine damaged by fire); *Russell v. Ford Motor Co.*, 281 Or. at 595, 575 P.2d at 1387 (tort recovery allowed for pickup truck damaged by fracture of axle housing).

¹⁶⁴ See Bellehumeur, *supra* note 146, at 334.

¹⁶⁵ See, e.g., *Pennsylvania Glass Sand Corp. v. Caterpillar Tractor Co.*, 652 F.2d 1165, 1174-75 (3d Cir. 1981); *Moorman Mfg. Co. v. National Tank Co.*, 435 N.E.2d at 450, *Russell v. Ford Motor Co.*, 281 Or. at 595, 575 P.2d at 1387; see also William K. Jones, *Product Defects Causing Commercial Loss: The Ascendancy of Contract Over Tort*, 44 U. MIAMI L. REV. 731, 748-52 (1990).

¹⁶⁶ See *Aloe Coal Co. v. Clark Equip. Co.*, 816 F.2d 110, 116 (3d Cir. 1987); *James v. Bell Helicopter Co.*, 715 F.2d 166 (5th Cir. 1983); *S.J. Groves & Sons Co. v. Aerospatiale Helicopter Corp.*, 374 N.W.2d 431, 434 (Minn. 1985); *Sharp Bros. Contracting Co. v. American Hoist & Derrick Co.*, 703 S.W.2d 901, 903 (Mo. 1986); *Mid Continent Aircraft Corp. v. Curry County Spraying Serv., Inc.*, 572 S.W.2d 308, 312-13 (Tex. 1978).

¹⁶⁷ 476 U.S. 858 (1986).

¹⁶⁸ See *East River S.S. Corp. v. Delaval Turbine, Inc.*, 752 F.2d 903 (3d Cir. 1985).

¹⁶⁹ *East River Steamship Corp. v. Transamerica Delaval*, 476 U.S. 858, 870 (1986).

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at 872-73.

nor risk-spreading considerations are involved when only the product itself is damaged.¹⁷² Consequently, subjecting manufacturers to tort liability in such cases would result in higher prices for goods to the consuming public without promoting any of the policies that underlie the law of products liability.¹⁷³

III

ASBESTOS ABATEMENT LITIGATION

A. *Liability Claims*

Presently, property owners are suing asbestos suppliers with increasing frequency in order to force them to pay for abatement costs.¹⁷⁴ In a number of cases, property owners have alleged, without much success, that sellers of asbestos products breached warranties of fitness or merchantability.¹⁷⁵ Some claims were dismissed for lack of privity¹⁷⁶ or notice,¹⁷⁷ while others were re-

¹⁷² See *id.* at 871.

¹⁷³ *Id.* at 871-72.

¹⁷⁴ See *Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp.*, 959 F.2d 868 (10th Cir. 1992); *Spartanburg County Sch. Dist. Seven v. United States Gypsum Co.*, 842 F.2d 1292 (4th Cir. 1988); *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975 (4th Cir. 1987); *Anderson County Bd. of Educ. v. National Gypsum Co.*, 821 F.2d 1230 (6th Cir. 1987); *City of Wichita v. United States Gypsum Co.*, 828 F. Supp. 851 (D. Kan. 1993); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410 (D.N.D. 1989); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866 (D.N.D. 1988); *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646 (D.R.I. 1986); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. 126 (D.N.H. 1984); *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855 (D.N.J. 1982); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580 (Ill. 1989); *Independent Sch. Dist. No. 622 v. Keene Corp.*, 495 N.W.2d 244 (Minn. Ct. App. 1993), *aff'd in part and rev'd in part*, 511 N.W.2d 728 (Minn. 1994); *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d 442 (Mo. Ct. App. 1988); *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d 653 (N.J. Super. 1991); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369 (S.C. 1990); *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179 (Wis. 1991); see also Lester Brickman, *The Asbestos Litigation Crisis: Is There a Need for an Administrative Alternative?*, 13 CARDOZO L. REV. 1817, 1850-52 (1992) (discussing asbestos-in-building claims).

¹⁷⁵ See *City of Greenville v. W.R. Grace & Co.*, 827 F.2d at 976; *T.H.S. Northstar Assocs., Ltd. v. W.R. Grace & Co.*, 767 F. Supp. 969, 970 (D. Minn. 1991); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. at 1411; *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 870; *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 131; *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 595; *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d at 370; *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d at 180.

¹⁷⁶ See *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 595-96.

jected because the statute of limitations had run.¹⁷⁸

Restitution based on section 115 of the Restatement of Restitution is another popular theory.¹⁷⁹ According to this provision, one who performs the duty of another by providing goods or services is entitled to restitution if the goods or services supplied are immediately necessary to satisfy the requirements of public health or safety.¹⁸⁰ Building owners who have paid for the cost of asbestos removal in order to prevent injury to building occupants maintain that they have provided a "service" that should have been provided by those who created the danger in the first place—suppliers and installers of asbestos products. Building owners who have paid for asbestos abatement argue that they are entitled to reimbursement under the principle of restitution.¹⁸¹

In addition, property owners have invoked a variety of tort theories, including fraudulent misrepresentation,¹⁸² private nuisance, negligence,¹⁸³ and strict products liability.¹⁸⁴ Fraudulent misrepresentation requires: (1) a false statement of material fact

¹⁷⁷ See *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 131-32; *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 595-96.

¹⁷⁸ *Anderson County Bd. of Educ. v. National Gypsum Co.*, 821 F.2d 1230, 1234 (6th Cir. 1987).

¹⁷⁹ See *Adams-Arapahoe Sch. Dist. No. 28-J v. Celotex Corp.*, 637 F. Supp. 1207, 1209 (D. Colo. 1986), *rev'd*, 959 F.2d 868 (10th Cir. 1992); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. 286, 302-04 (D. Minn. 1990); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410, 1414-15 (D.N.D. 1989); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866, 868-69 (D.N.D. 1988); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. 126, 134 (D.N.H. 1984); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580, 596 (Ill. 1989); *City of New York v. Keene Corp.*, 505 N.Y.S.2d 782, 784 (N.Y. Sup. Ct. 1986), *aff'd*, 513 N.Y.S.2d 1004 (N.Y. App. Div. 1987); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369, 370 (S.C. 1990).

¹⁸⁰ See RESTATEMENT OF RESTITUTION § 115 (1937).

¹⁸¹ See, e.g., *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 596-97.

¹⁸² See *T.H.S. Northstar Assocs. v. W.R. Grace & Co.*, 767 F. Supp. 969, 970 (D. Minn. 1991); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. at 289-90; *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 870; *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646, 654 (D.R.I. 1986); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 132; *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 287 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 591; *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d 653, 653 (N.J. Super. Ct. App. Div. 1991); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d at 370.

¹⁸³ See, e.g., *Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp.*, 959 F.2d 868, 870 (10th Cir. 1992); *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 976 (4th Cir. 1987); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. at 1411; *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 870; *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 585; *Kershaw County Bd. of Educ. v.*

by the defendant; (2) knowledge on the part of the defendant that the statement is false; (3) intent by the defendant to induce the plaintiff to act; (4) action by the plaintiff in reliance upon the defendant's statement; and (5) damage to the plaintiff from such reliance.¹⁸⁵ Property owners often claim that asbestos suppliers who knew that exposure to asbestos was hazardous to human health fraudulently misrepresented that their products were safe.¹⁸⁶

Property owners have also claimed that asbestos suppliers have created private nuisances by installing products that constitute a health hazard to building occupants.¹⁸⁷ However, nuisance claims against asbestos manufacturers have generally failed because the defendants were not in control of the property when nuisance conditions were created.¹⁸⁸

Negligence and strict products liability appear to be the most popular theories of recovery, largely because their requirements are easier to satisfy than those of fraudulent misrepresentation and nuisance. Negligence claims are based on either the sale of a

United States Gypsum Co., 396 S.E.2d at 370; *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179, 180 (Wis. 1991).

¹⁸⁴ See, e.g., *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410, 1411 (D.N.D. 1989); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866, 870 (D.N.D. 1988); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. 126, 129 (D.N.H. 1984); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580, 585 (Ill. 1989); *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d 442, 444 (Mo. Ct. App. 1988); *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d at 653; *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d at 180.

¹⁸⁵ *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 591.

¹⁸⁶ See *id.* at 594; see also *T.H.S. Northstar Assocs. v. W.R. Grace & Co.*, 767 F. Supp. at 970; *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. 286, 289-90 (D. Minn. 1990); *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 870; *City of Manchester v. National Gypsum Co.*, 637 F. Supp. at 654 n.12; *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 132; *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. at 287; *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 591; *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d at 653; *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369, 370 (S.C. 1990).

¹⁸⁷ See *T.H.S. Northstar Assocs. v. W.R. Grace & Co.*, 767 F. Supp. 969, 970 (D. Minn. 1991); *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. at 1411; *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. at 871-72; *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646, 656 (D.R.I. 1986); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 133; *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 294 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985).

¹⁸⁸ See *City of Manchester v. National Gypsum Co.*, 637 F. Supp. at 656; *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 133; *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. at 294.

hazardous product or failure to warn about the risks of exposure to asbestos-containing materials.¹⁸⁹ Strict liability claims allege that such materials are defectively designed because exposure to asbestos may cause death or serious injury.¹⁹⁰

B. The "Liberal" Definition of Physical Injury

Because property owners seek reimbursement for abatement expenses (economic harm) rather than compensation for structural damage to their buildings (physical damage), one would expect courts to consider only contract remedies, at least in jurisdictions that adhere to the "physical injury" rule of tort law. In fact, most courts have done just the opposite, freely allowing property owners to sue in tort by adopting a "liberal" definition of physical injury.¹⁹¹ A survey of recent asbestos abatement cases reveals at least three techniques that courts have used to transform abatement reimbursement claims into claims based on physical injury.

According to the "endangered occupant" theory, abatement costs are treated as a form of physical injury because asbestos, if not removed, may harm third parties.¹⁹² Courts also employ what might be called an "essence of the transaction" theory.¹⁹³ This technique treats the cost of alleviating health risks as a physical injury in cases where the product safety risks have not been expressly allocated between buyer and seller in the sales agreement.¹⁹⁴ A third tactic known as the "contamination" theory¹⁹⁵ classifies contamination as a physical injury to property because it lowers the value of other property within the building.¹⁹⁶ These approaches are not mutually exclusive, and courts often rely on more than one to reach a decision.¹⁹⁷

¹⁸⁹ See, e.g., *City of Greenville v. W.R. Grace & Co.*, 640 F. Supp. 559, 563 (D.S.C. 1986); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580, 585 (Ill. 1989).

¹⁹⁰ See, e.g., *Adams-Arapahoe Sch. Dist. No. 28-J v. Celotex Corp.*, 637 F. Supp. 1207, 1209 (D. Colo. 1986), *rev'd*, 959 F.2d 868 (10th Cir. 1992); *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179, 180 (Wis. 1991); see also Brenza, *supra* note 3, at 285 (arguing that building materials containing asbestos are defective in design because they possess characteristics that have proven to be unreasonably dangerous).

¹⁹¹ See text accompanying notes 198-240.

¹⁹² See cases cited in note 199.

¹⁹³ See cases cited in note 210.

¹⁹⁴ See text accompanying notes 210-23.

¹⁹⁵ See text accompanying notes 224-40.

¹⁹⁶ See cases cited in note 224.

¹⁹⁷ See *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 977-78 (4th Cir.

1. The "Endangered Occupant" Theory

Although most courts refuse to treat the mere prospect of future harm as a physical injury,¹⁹⁸ courts often allow property owners to sue in tort when asbestos fibers are actually released within a building, even though no one is injured.¹⁹⁹ An illustrative case is *City of Greenville v. W.R. Grace & Co.*, a negligence action against the manufacturer of an asbestos fireproofing product known as Monokote, which was installed in the Greenville City Hall in 1971.²⁰⁰

The defendant alleged that the city had suffered only economic harm.²⁰¹ However, in affirming the trial court's decision permitting the city to recover the costs of removing and replacing its ceiling material, the Fourth Circuit concluded that tort liability should be extended to any manufacturer "whose product threatens a substantial and unreasonable risk of harm by releasing toxic substances into the environment."²⁰² The *Greenville* court apparently assumed that the physical injury requirement was sat-

1987) (endangered occupant and essence of transaction theories); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. 286, 301-02 (D. Minn. 1990) (endangered occupant and essence of transaction theories); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855, 859 (D.N.J. 1982), *aff'd*, 882 F.2d 510 (3d Cir. 1989) (essence of transaction and contamination theories); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580, 588-90 (Ill. 1989) (endangered occupant and contamination theories); *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d 393, 397 (Minn. 1992) (endangered occupant, essence of transaction and contamination theories); *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d 442, 456-57 (Mo. Ct. App. 1988) (endangered occupant and contamination theories); *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d 653, 655-56 (N.J. Super. Ct. App. Div. 1991) (endangered occupant and contamination theories).

¹⁹⁸ See *Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp.*, 959 F.2d 868, 872-73 (10th Cir. 1992) ("[W]e hold the School District's claim based on risk of potential future harm is not cognizable in the present action."); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 587 ("The dangerousness which creates a risk of harm is insufficient standing alone to award damages in either strict products liability or negligence.").

¹⁹⁹ See *Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp.*, 959 F.2d at 873-74; *City of Greenville v. W.R. Grace & Co.*, 827 F.2d at 977-78; *City of Wichita v. United States Gypsum Co.*, 828 F. Supp. 851, 855-56 (D. Kan. 1993); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. at 301; *Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co.*, 728 F. Supp. 1410, 1413 (D.N.D. 1989); *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d at 588; *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d at 397; *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d at 457.

²⁰⁰ *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 976 (4th Cir. 1987).

²⁰¹ *Id.* at 977.

²⁰² *Id.* at 978.

ified because someone was endangered by the defendant's product, even though the endangered party was not the plaintiff.

A New Jersey appellate court adopted a similar approach in *Livingston Board of Education v. United States Gypsum Co.*,²⁰³ a suit brought by a local school board to recover the costs of removing Audicote, an asbestos ceiling product manufactured by the defendant.²⁰⁴ Ruling in favor of the board, the court observed that the board's damages included "expenses incurred by the board in an effort to reduce the danger of severe personal injury to those in the school building resulting from exposure to airborne asbestos fibers, and the damage to the building consequent on the removal process."²⁰⁵ The court reasoned that the physical injury requirement was satisfied when a property owner spent money in order to prevent personal injuries from occurring in the future.²⁰⁶

Unfortunately, the "endangered occupant" theory suffers from a major conceptual flaw; it confuses the damage sustained by the building owner with that potentially suffered by endangered occupants. When a building owner sues in tort, he or she must show that the building has been physically damaged in some way. Since asbestos-containing materials do not physically alter any part of the building or impair its structural integrity,²⁰⁷ it is difficult to see how a property damage claim can be sustained. Nor does the fact that others may suffer personal injuries have any bearing on whether the building owner has suffered *property* damage. The two types of claims are entirely different.

Additionally, the property damage suffered by the building owners is essentially an economic harm. The owners are not seeking to recover costs incurred to restore the building to its prior physical condition; instead, they are seeking reimbursement for money spent to mitigate or avoid future damage claims by building occupants.

Some courts have suggested that tort actions by property owners against asbestos manufacturers are appropriate because prod-

²⁰³ *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d 653, 653 (N.J. Super. Ct. App. Div. 1991).

²⁰⁴ *Id.*

²⁰⁵ *Id.* at 655.

²⁰⁶ *Id.* at 656.

²⁰⁷ Asbestos abatement activities have a physical impact on the building, but these changes result solely from the actions of the property owner.

uct safety is a major concern of tort law.²⁰⁸ But this analysis also confuses the legal interests of building occupants with those of the property owner. Building occupants who are exposed to asbestos products can sue on their own behalf.²⁰⁹ Thus, there is no reason to allow property owners to act as their surrogates.

2. The "Essence of the Transaction" Theory

A number of courts distinguish product defects that create a risk of personal injury from those that merely frustrate a buyer's expectations about the product's performance.²¹⁰ These courts allow buyers who are subjected to a risk of personal injury to sue in tort. Yet they limit those whose product performance expectations are frustrated to contract remedies because they are merely seeking to realize the benefit of their bargain.²¹¹

Some courts apply this analysis when product safety risks have not been expressly allocated between buyer and seller in the sales agreement. Because these risks have not been placed on the buyer by contract, courts feel free to shift them to the seller through the application of negligence and strict liability principles. For example, the Minnesota Supreme Court observed in *80 South Eighth Street Limited Partnership v. Carey-Canada, Inc.*²¹² that the risk of personal injury created by asbestos was not the sort of product failure that the parties had contemplated in the bargaining process:

The claim here is not that the fireproofing failed to perform

²⁰⁸ See *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855, 859 (D.N.J. 1982), *aff'd*, 882 F.2d 510 (3d Cir. 1989); *Board of Educ. v. A. C. & S, Inc.*, 546 N.E.2d 580, 590 (Ill. 1989); *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d 393, 398 (Minn. 1992); *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179, 186 (Wis. 1991); see also John P. Kincade, Comment, *Issues in School Asbestos Hazard Abatement Litigation*, 16 ST. MARY'S L.J. 951, 967 (1985) ("[E]ven if a court determines that damage to persons or collateral property is not present, policy considerations suggest compensation under tort as property damage when the injury, although confined to the asbestos product itself, is occasioned by an unreasonably dangerous product, as opposed to a merely defective product.").

²⁰⁹ Brenza, *supra* note 3, at 303-04.

²¹⁰ See *City of Greenville v. W.R. Grace & Co.*, 827 F.2d 975, 977-78 (4th Cir. 1987); *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. 286, 301 (D. Minn. 1990); *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d at 397.

²¹¹ *City of Greenville v. W.R. Grace & Co.*, 827 F.2d at 977-78; *Independent Sch. Dist. No. 197 v. W.R. Grace & Co.*, 752 F. Supp. at 301; *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d at 397.

²¹² *80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc.*, 486 N.W.2d at 393.

satisfactorily as fireproofing. Such a claim arising from the failure of the product to meet expectations of suitability, quality and performance resulting in damages which a party to a sales contract could reasonably expect would flow from a defect in the product is a benefit of the bargain claim better addressed under contract and the Uniform Commercial Code. Rather, the claim here is that the Monokote introduced into the building asbestos which [sic] is highly dangerous to humans.²¹³

Thus, the court decided the case using tort law principles instead of contract law.²¹⁴

Courts that follow this approach apparently believe that they may allocate liability according to their own notions of fairness or public policy, as long as the sales agreement does not explicitly allocate product safety risks between the parties. This reasoning, however, ignores the fact that the UCC contains a number of risk allocation provisions that are specifically designed to supplement the express language of the sales contract. For example, an implied warranty places certain risks on the seller if the product proves to be defective, while other risks fall on the buyer unless the seller assumes additional responsibility by giving an express warranty. Likewise, the remedies provisions of the UCC provide protection to the parties in the event of breach.²¹⁵ These provisions, unless expressly waived or modified,²¹⁶ automatically apply to all sales contracts within the UCC's purview. Thus, the fact that product safety risks are not expressly mentioned in the sales agreement does not mean that such risks are not covered by the UCC's "default" provisions.

Another form of the "essence of the transaction" theory relies on the distinction between expectation interests and existing entitlements. When a product that does not perform as it should affects the buyer's performance expectation interests, claims should be adjudicated according to principles of contract law.²¹⁷ In contrast, a product that causes physical harm affects existing entitlements, not expectations of future gain. Injuries of this sort

²¹³ 80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc., 486 N.W.2d at 397.

²¹⁴ *Id.* at 399.

²¹⁵ *E.g.*, U.C.C. §§ 2-708 (seller's damages for nonacceptance or repudiation); 2-711 (buyer's remedies); 2-715 (buyer's incidental and consequential damages).

²¹⁶ *Id.* §§ 2-718 (liquidation or limitation of damages); 2-719 (modification or limitation of remedy).

²¹⁷ *See* Bellehumeur, *supra* note 146, at 328.

can be compensated properly under tort law doctrines.²¹⁸

When courts rely on this distinction in asbestos abatement cases, they emphasize that asbestos products perform their insulation functions adequately, and conclude that the property owner's performance expectation interests have not been impaired. Because expectation interests have not been affected, the courts reason that the claim must involve an existing entitlement and, therefore, be actionable in tort. In *Cinnaminson Township Board of Education v. United States Gypsum Co.*,²¹⁹ the board of education sued to recover the cost of removing and replacing asbestos-containing ceiling plaster in a number of schools.²²⁰ Rejecting the defendant manufacturer's motion for summary judgment, the federal district court declared that "the problem with USG's product is not that it did not perform its function in the ceiling plaster, but rather that it posed a grave risk of personal injury to those [who came] in contact with it."²²¹ The fact that the product did not fail to perform as expected, coupled with the fact that it endangered others, was enough for the *Cinnaminson Township* court to conclude that the tort statute of limitation was applicable to the board's claim.²²²

Although the distinction between performance expectation interests and existing entitlements is a useful one, it should not be the only basis for deciding whether tort or contract principles should control in a particular situation. The UCC protects much more than expectation interests. In fact, it provides remedies for virtually all losses, including personal injuries, that may flow from the sale of defective or nonconforming goods.²²³ Therefore, courts should not assume that contract law is necessarily displaced merely because abatement claims do not involve product expectations.

3. The "Contamination" Theory

Many courts rely on a "contamination" theory to satisfy the

²¹⁸ See Richard E. Speidel, *The Borderland of Contract*, 10 N. KY. L. REV. 163, 185 (1983).

²¹⁹ *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855 (D.N.J. 1982).

²²⁰ *Id.* at 856.

²²¹ *Id.* at 859.

²²² *Id.* at 862.

²²³ See Kaprelian, *supra* note 106, at 525.

physical injury requirement.²²⁴ These courts reason that damage to collateral property such as drapes, carpets and other parts of the building caused by asbestos fibers is a physical injury.²²⁵

In one of the first cases to rely on the "contamination" theory, *Town of Hooksett School District v. W.R. Grace & Co.*,²²⁶ a school district sued to recover the cost of removing and replacing asbestos insulation in one of its schools.²²⁷ When the defendant moved to dismiss the plaintiff's negligence and strict liability claims, the federal district court concluded that the school board's claims were valid because the asbestos had contaminated other parts of the building. According to the *Hooksett* court, the contamination constituted a physical injury to the school board's property.²²⁸

Similarly, in *Board of Education v. A, C & S, Inc.*,²²⁹ a suit by 34 school districts seeking damages against various manufacturers and suppliers of asbestos products for the cost of removing asbestos materials from their school buildings,²³⁰ the Illinois Supreme Court found that the health hazard created by contamination of a building by asbestos fibers constituted physical damage to the building.²³¹ The court acknowledged that the contamination did not occur suddenly or violently, but concluded that these conditions were not essential to maintaining a tort action.²³² Accordingly, the court upheld the plaintiffs' right to sue

²²⁴ See *Hebron Pub. Sch. Dist. No. 13 v. United States Gypsum Co.*, 690 F. Supp. 866, 870 (D.N.D. 1988); *City of Manchester v. National Gypsum Co.*, 637 F. Supp. 646, 651-52 (D.R.I. 1986); *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. 126, 131 (D.N.H. 1984); *County of Johnson v. United States Gypsum Co.*, 580 F. Supp. 284, 292 (E.D. Tenn. 1984), *vacated in part*, 664 F. Supp. 1127 (E.D. Tenn. 1985); *Cinnaminson Township Bd. of Educ. v. United States Gypsum Co.*, 552 F. Supp. 855, 859 (D.N.J. 1982), *aff'd*, 882 F.2d 510 (3d Cir. 1989); *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d 442, 456 (Mo. Ct. App. 1988); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369, 371 (S.C. 1990); *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179, 186 (Wis. 1991).

²²⁵ However, the contamination theory has been applied in jurisdictions that do not exclude damage to collateral property from the economic loss rule. See 80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc., 486 N.W.2d 393, 397 (Minn. 1992).

²²⁶ *Hooksett Sch. Dist. v. W.R. Grace & Co.*, 617 F. Supp. at 126.

²²⁷ *Id.* at 128-29.

²²⁸ *Id.* at 131.

²²⁹ *Board of Educ. v. A, C & S, Inc.*, 546 N.E.2d 580 (Ill. 1989).

²³⁰ *Id.* at 583.

²³¹ *Id.* at 588-90.

²³² *Id.* at 590.

under negligence and strict liability.²³³

In *Northridge Co. v. W.R. Grace & Co.*,²³⁴ several shopping center owners brought suit under breach of warranty and tort against the manufacturer of Monokote, a fireproofing material.²³⁵ The plaintiffs alleged that asbestos in the Monokote contaminated their buildings. The Wisconsin Supreme Court reversed the lower court's dismissal of plaintiffs' action for loss of property value and for the cost of inspection testing and removal of the asbestos material.²³⁶ The court found that Monokote physically harmed the plaintiffs' buildings; the asbestos particles in the air created an immediate safety hazard to the buildings' occupants.²³⁷

Courts that invoke the "contamination" theory correctly point out that asbestos fibers may contaminate collateral property.²³⁸ However, they are wrong to assume that any harm to collateral property ipso facto qualifies as a physical injury. To find a physical injury, a defective product must do more than merely diminish the value or utility of the plaintiff's collateral property.²³⁹ Thus, insulation that gives off unpleasant but harmless odors or carpeting that becomes discolored impairs the utility of the entire building but does not physically damage it.²⁴⁰ These types of injuries are properly treated as economic harm rather than physical injury.

Although the "contamination" theory of liability focuses on the building, rather than on third parties, any harm suffered by the building owner stems from the effect of asbestos fibers on third parties, whether asbestos fibers merely circulate through the air or whether they also happen to contaminate the rest of the building. Thus, the property owner's injury is indirect and based solely on the need to spend money in order to use the building lawfully. Arguably, this is an economic harm, not a physical injury.

²³³ *Id.* at 591.

²³⁴ *Northridge Co. v. W.R. Grace & Co.*, 471 N.W.2d 179 (Wis. 1991).

²³⁵ *Id.* at 180.

²³⁶ *Id.*

²³⁷ *Id.* at 186.

²³⁸ See *School Dist. No. 30 v. United States Gypsum Co.*, 750 S.W.2d 442, 456 (Mo. Ct. App. 1988); *Livingston Bd. of Educ. v. United States Gypsum Co.*, 592 A.2d 653, 656 (N.J. Super. Ct. App. Div. 1991); *Kershaw County Bd. of Educ. v. United States Gypsum Co.*, 396 S.E.2d 369, 371 (S.C. 1990).

²³⁹ See *Bland & Wattson*, *supra* note 156, at 19.

²⁴⁰ *Cf.* 2000 Watermark Ass'n v. Celotex Corp., 784 F.2d 1183 (4th Cir. 1986).

IV

CHOOSING A DEFINITION OF "PHYSICAL INJURY"

Possible definitions of physical injury range from restrictive to very expansive.²⁴¹ At the narrow end of the continuum, the definition of physical injury excludes property damage entirely. At the other end, the definition includes any harm caused by a defective product as long as the defect is potentially dangerous. There are a number of definitions in between these two extremes. For example, one definition includes damage to property as long as the victim also suffers personal injuries. Another approach confines property damage claims to cases where the defective product causes direct and immediate physical harm to property other than the defective product itself.

There are advantages and disadvantages to each of these alternatives. Arguably, the most appropriate definition of physical injury is the one that best advances public policies such as allocative efficiency and loss spreading. The next few sections explore how well each of the aforementioned definitions of physical injury take public policy into account.

A. *Policy Considerations*

Courts and commentators typically consider various public policies when they discuss products liability issues.²⁴² Allocative efficiency and loss spreading are probably the most significant policies considered.²⁴³

²⁴¹ This section will be limited to a discussion of physical injury to property and will not attempt to define physical injury to person. Physical injury to person includes death and personal injury, as well as certain intangible costs such as pain and suffering. See RESTATEMENT (SECOND) OF TORTS § 15 (1965) (defining "bodily harm").

²⁴² See James A. Henderson, Jr., *Coping with the Time Dimension in Products Liability*, 69 CAL. L. REV. 919, 931-39 (1981) (discussing product safety, market deterrence, reduction of transaction costs and loss spreading); David G. Owen, *Rethinking the Policies of Strict Products Liability*, 33 VAND. L. REV. 681, 703-14 (1980) (discussing loss spreading, representational liability, and product safety); William C. Powers, Jr., *Distinguishing Between Products and Services in Strict Liability*, 62 N.C. L. REV. 415, 423-28 (1984) (discussing product safety, loss spreading and enterprise liability); George L. Priest, *The Invention of Enterprise Liability: A Critical History of the Intellectual Foundations of Modern Tort Law*, 14 J. LEGAL STUD. 461, 520 (1985) (discussing superior bargaining power of manufacturer, loss spreading and product safety); Gary J. Highland, Note, *Sales of Defective Used Products: Should Strict Liability Apply?*, 52 S. CAL. L. REV. 805, 811-19 (1979) (discussing enterprise liability, product safety, loss spreading, practicality and representational liability).

²⁴³ For a discussion of other policy bases of strict products liability see Richard C.

1. Allocative Efficiency

Allocative efficiency involves distributing economic resources within society in a way that maximizes social welfare.²⁴⁴ In the absence of market imperfections, voluntary exchanges between individuals tend to direct resources toward their most productive uses.²⁴⁵ The law of contracts is designed to facilitate this bargaining process, and thereby achieve an efficient allocation of resources.²⁴⁶ Tort law, on the other hand, is less likely to be as efficient as private decisionmaking. First, tort law promotes a number of important societal values and, consequently, sometimes subordinates allocative efficiency to other social goals.²⁴⁷ Second, there are significant administrative costs associated with the operation of the tort system in the United States.²⁴⁸ In many

Ausness, *Compensation for Smoking-Related Injuries: An Alternative to Strict Liability in Tort*, 36 WAYNE L. REV. 1085, 1093-1102 (1990) (discussing corrective justice as a basis for cigarette manufacturer liability); Mary J. Davis, *Design Defect Liability: In Search of a Standard of Responsibility*, 39 WAYNE L. REV. 1217, 1248-67 (1993) (proposing a theory of liability based on manufacturer responsibility to consumer); F. Patrick Hubbard, *Reasonable Human Expectations: A Normative Model for Imposing Strict Liability for Defective Products*, 29 MERCER L. REV. 465 (1978) (advocating a representational theory of liability); David G. Owen, *The Moral Foundations of Products Liability Law: Toward First Principles*, 68 NOTRE DAME L. REV. 427, 459-500 (1993) (suggesting that products liability should reflect principles of personal freedom and the concept of community); Marshall S. Shapo, *A Representational Theory of Consumer Protection: Doctrine, Function and Legal Liability for Product Disappointment*, 60 VA. L. REV. 1109, 1155-1293 (1974) (proposing a theory of liability based on implied representations of quality).

²⁴⁴ See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 10 (1972) [hereinafter POSNER, *ECONOMIC ANALYSIS*].

²⁴⁵ Because people value goods differently, they can often benefit from voluntary exchanges. Although exchanges can occur through barter, in more developed economies, people use money to purchase the goods they want. In either event, a mutually beneficial exchange of resources will have occurred. See Richard A. Posner, *Utilitarianism, Economics, and Legal Theory*, 8 J. LEGAL STUD. 103, 120 (1979). Consumers create a demand for goods and services based on their individual preferences, while producers determine levels of output that maximize their profits. See A. Mitchell Polinsky, *Economic Analysis as a Potentially Defective Product: A Buyer's Guide to Posner's Economic Analysis of Law*, 87 HARV. L. REV. 1655, 1666 (1974). In this manner, resources are allocated to their highest-valued uses, as measured by willingness to pay. POSNER, *ECONOMIC ANALYSIS*, *supra* note 244, at 10-13.

²⁴⁶ See Kaprelian, *supra* note 106, at 526.

²⁴⁷ See Stephen D. Sugarman, *Doing Away with Tort Law*, 73 CAL. L. REV. 555, 591-96, 603-09 (1985) (discussing compensation and corrective justice goals of tort law).

²⁴⁸ *Id.* at 596; see also Michel A. Coccia, *Uniform Products Liability Legislation: A Proposed Federal Solution*, 51 INS. COUNS. J. 104 (1984). According to a 1984 study by the Rand Corporation, administrative costs have been especially high in asbestos

cases, these administrative costs may wipe out the economic benefits that would otherwise flow from lower accident costs resulting from the imposition of tort liability.

Allocative efficiency involves placing risks on the parties who can bear them most cheaply.²⁴⁹ In a sales transaction, the parties themselves can usually arrive at the most efficient allocation of product-related risks.²⁵⁰ Of course, buyers must have sufficient information to evaluate product risks accurately.²⁵¹ In addition, buyers must have sufficient bargaining power to induce sellers to accept product-related risks when they are the most efficient risk-bearers.²⁵²

Buyers appear to have sufficient information and bargaining power, at least in theory, when they bargain with sellers over non-safety issues such as product quality and performance. Manufacturers, of course, are thoroughly familiar with the products they produce.²⁵³ However, commercial buyers are also knowledgeable about the quality and performance characteristics of the products they buy.²⁵⁴ Even ordinary consumers are generally well informed about product quality,²⁵⁵ and when they are not, they can assess product quality by examining the level of warranty protection offered by sellers.²⁵⁶ Usually, commercial buyers have sufficient economic power to bargain directly for warranty protection from the seller,²⁵⁷ while ordinary consumers can take advantage of the willingness of sellers to offer favorable warranty protection.²⁵⁸

litigation. The study concluded that sixty-one percent of the money spent to satisfy asbestos claims was consumed by legal fees and expenses. See Deborah R. Hensler, *Fashioning a National Resolution of Asbestos Personal Injury Litigation: A Reply to Professor Brickman*, 13 CARDOZO L. REV. 1967, 1977 (1992).

²⁴⁹ Brenza, *supra* note 3, at 291.

²⁵⁰ For example, one party may be able to insure against a particular risk more cheaply than the other. See Guido Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE L.J. 499, 506 (1961).

²⁵¹ See Brenza, *supra* note 3, at 291-92.

²⁵² See Heiner, *supra* note 12, at 1342.

²⁵³ Owen, *supra* note 242, at 711.

²⁵⁴ See Turner, *supra* note 145, at 179.

²⁵⁵ See Alan Schwartz & Louis L. Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests*, 69 VA. L. REV. 1387, 1435-42 (1983) [hereinafter Schwartz & Wilde, *Imperfect Information*].

²⁵⁶ See George L. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1303 (1981).

²⁵⁷ See Kaprelian, *supra* note 106, at 533.

²⁵⁸ In a competitive environment, firms will offer the same warranty terms to all consumers even though only some consumers are willing to search for, and bargain

Unfortunately, the market appears to operate less efficiently when it allocates the risk of personal injury between buyers and sellers. Because manufacturers are familiar with the design and quality of their products, they can predict the incidence and gravity of product-related injuries.²⁵⁹ Consumers, on the other hand, are seldom well-informed about product safety.²⁶⁰ Consequently, they do not always bargain vigorously for warranty protection against personal injury. Furthermore, even when consumers are fully informed about safety-related risks, they often discount or ignore infrequent but potentially catastrophic risks when they purchase potentially dangerous products.²⁶¹ Finally, buyers and sellers have no incentive to take account of the interests of third parties when they allocate risk by private contract.²⁶²

For these reasons, tort law seems functionally more effective than contract law when litigants suffer personal injuries from defective products. Unlike contract law, tort law makes product manufacturers liable for consumer injuries which gives producers an economic incentive to allocate an efficient level of resources to product safety.²⁶³

However, some commentators have expressed doubts about whether imposing tort liability upon product manufacturers necessarily encourages them to make efficient resource allocation

for, the best terms. See Alan Schwartz & Louis L. Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PA. L. REV. 630, 638 (1979). However, while sellers are willing to offer warranty protection, they often charge consumers more than the protection is worth. Schwartz & Wilde, *Imperfect Information*, *supra* note 255, at 1390-91 n.1.

²⁵⁹ Owen, *supra* note 242, at 711.

²⁶⁰ See Schwartz & Wilde, *Imperfect Information*, *supra* note 255, at 1440. One reason for this is that consumers do not spend as much time searching for information about inexpensive products as they do searching for information about expensive ones. Yet, even inexpensive products can be very hazardous when they are defective. See Note, *Enforcing Waivers in Products Liability*, 69 VA. L. REV. 1111, 1128 (1983).

²⁶¹ Schwartz, *supra* note 105, at 65; Note, *Harnessing Madison Avenue: Advertising and Products Liability Theory*, 107 HARV. L. REV. 895, 900-01 (1994) (discussing the claim that consumers do not rationally evaluate information about product risks). But see Alan Schwartz, *The Case Against Strict Liability*, 60 FORDHAM L. REV. 819, 829 (1992) ("[c]onsumers do not underestimate risk levels").

²⁶² Richard J. Pierce, Jr., *Encouraging Safety: The Limits of Tort Law and Government Regulation*, 33 VAND. L. REV. 1281, 1284 (1980).

²⁶³ See Note, *Economic Loss in Products Liability Jurisprudence*, 66 COLUM. L. REV. 917, 951 (1966).

decisions.²⁶⁴ First, liability costs may not be fully internalized because some accident victims will not sue product manufacturers when they are injured or will accept minimal settlements in order to avoid the emotional and financial costs of litigation.²⁶⁵ Second, product manufacturers may prefer to purchase liability insurance instead of spending an appropriate amount of money on product safety research.²⁶⁶ Third, many product manufacturers ignore the prospect of tort liability when long-term risks (and potential liability) are involved. Instead, corporate managers discount long-term risks excessively and focus on short-term profits because they expect to be gone from the company before decisions affecting future tort liability have any effect.²⁶⁷

2. *Loss Spreading*

Loss spreading is often suggested as a justification for products liability.²⁶⁸ Proponents of loss spreading²⁶⁹ argue that it is better to spread economic losses among a large number of people than to allow them to fall entirely on a few individuals.²⁷⁰ The principal rationale for loss spreading is utilitarian: the overall social harm that results from an injury can be lessened if numerous persons each bear a small portion of the loss instead of permitting a single victim to bear the entire loss.²⁷¹ Loss spreading may also be grounded in communitarian values. Communitarianism

²⁶⁴ Powers, *supra* note 242, at 423 n.32; see also Sheila L. Birnbaum, *Unmasking the Test for Design Defect: From Negligence [to Warranty] to Strict Liability to Negligence*, 33 VAND. L. REV. 593, 643-45 (1980).

²⁶⁵ Richard L. Abel, *A Critique of Torts*, 37 UCLA L. REV. 785, 796-98 (1990); Mark P. Robinson, Jr. & Gerald H.B. Kane, Jr., *Punitive Damages in Product Liability Cases*, 6 PEPP. L. REV. 139, 142 (1978).

²⁶⁶ See Nicholas B. Simonetta, Note, *Defeat for the State-of-the-Art Defense in New Jersey Products Liability: Beshada v. Johns-Manville Products Corp.*, 14 RUTGERS L.J. 953, 974 (1983).

²⁶⁷ See Sugarman, *supra* note 247, at 569. This is known as the "Faust effect." Pierce, *supra* note 262, at 1301.

²⁶⁸ Page Keeton, *Products Liability—Some Observations About Allocation of Risks*, 64 MICH. L. REV. 1329, 1333 (1966); Page Keeton, *Products Liability—Liability without Fault and the Requirement of a Defect*, 41 TEX. L. REV. 855, 856 (1963) [hereinafter Keeton, *Liability without Fault*].

²⁶⁹ The terms "loss spreading" and "risk spreading" are often used interchangeably. Strictly speaking, risk-spreading mechanisms, like insurance, spread the risk of loss *ex ante* among a group of potential victims, while loss-spreading mechanisms, like tort liability doctrines, spread losses *ex post* after they have already occurred. See Owen, *supra* note 243, at 486.

²⁷⁰ Calabresi, *supra* note 250, at 517-18; Henderson, *supra* note 242, at 934.

²⁷¹ See Calabresi, *supra* note 250, at 517-18.

places less emphasis on individual autonomy and instead stresses interdependence and mutual support within the community.²⁷² This view of society supports a communal sharing of economic burdens, like accident costs.²⁷³ Finally, loss spreading is often justified on the basis of enterprise liability, meaning that those who enjoy the benefits of an activity must assume responsibility for any harm that the activity causes to others.²⁷⁴ Thus, sellers and consumers who benefit from the sale of a product have a moral obligation to compensate those who are injured as a result of the product's presence in the market.²⁷⁵

Regardless of which theory of loss spreading is invoked, product manufacturers appear to be excellent loss spreaders. According to conventional wisdom, manufacturers can obtain liability insurance at reasonable rates²⁷⁶ or they can self-insure.²⁷⁷ In either case, they are able to pass on their liability costs to the consuming public in the form of higher prices for their products.²⁷⁸ Moreover, since most manufacturers sell to a mass market, the incremental cost to each consumer from such price increases is likely to be small.²⁷⁹

However, not everyone agrees that manufacturers can effectively spread losses.²⁸⁰ A manufacturer's ability to pass on additional costs to its customers is affected by its competitive position.²⁸¹ Furthermore, there is always some limit to the losses

²⁷² See generally Drucilla Cornell, *Beyond Tragedy and Complacency*, 81 NW. U. L. REV. 693 (1987); Philip Selznick, *The Idea of a Communitarian Morality*, 75 CAL. L. REV. 445 (1987).

²⁷³ See Owen, *supra* note 243, at 458.

²⁷⁴ See Howard C. Klemme, *The Enterprise Liability Theory of Torts*, 47 U. COLO. L. REV. 153, 158 (1976); Note, *Plaintiffs' Conduct as a Defense to Claims Against Cigarette Manufacturers*, 99 HARV. L. REV. 809, 821 (1986).

²⁷⁵ See Priest, *supra* note 242, at 463.

²⁷⁶ See Guido Calabresi & Jon T. Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055, 1056 (1972); John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 828 (1973).

²⁷⁷ See Michael M. Greenfield, *Consumer Protection in Service Transactions—Implied Warranties and Strict Liability in Tort*, 1974 UTAH L. REV. 661, 691.

²⁷⁸ See Keeton, *Liability Without Fault*, *supra* note 268, at 856.

²⁷⁹ See James B. Sales, *The Service-Sales Transaction: A Citadel Under Assault*, 10 ST. MARY'S L.J. 13, 16 (1978).

²⁸⁰ See, e.g., James E. Britain, *Product Honesty is the Best Policy: A Comparison of Doctors' and Manufacturers' Duty to Disclose Drug Risks and the Importance of Consumer Expectations in Determining Product Defect*, 79 NW. U. L. REV. 342, 410 (1984) (product manufacturer may not always be the best loss spreader).

²⁸¹ See Calabresi, *supra* note 250, at 522-23. Some loss spreading may occur even if a manufacturer cannot pass all of its costs on to consumers. For example, loss spreading may be achieved if the manufacturer shifts some of its costs to a large

that an enterprise can spread.²⁸² Nor is insurance necessarily an effective loss-spreading mechanism.²⁸³ Liability insurance premiums have increased dramatically²⁸⁴ in recent years as the number of lawsuits filed and the size of verdicts has skyrocketed.²⁸⁵ Thus, while loss spreading is generally a persuasive rationale for products liability, it is less valid in certain situations.

B. Four Definitions of "Physical Injury"

This section will evaluate the four aforementioned definitions of "physical injury." The first, and most restrictive, definition of physical injury would exclude property damage entirely and limit recovery under tort law to bodily harm. The second definition of physical injury would extend tort liability to property damage when it is accompanied by a contemporaneous personal injury. The third, and preferred, definition of physical injury would allow consumers to recover in tort for any direct and immediate physical damage to collateral property even in the absence of bodily harm. The final, and broadest, definition of physical injury would permit plaintiffs to seek compensation in tort for abatement costs incurred to make their property safe for present and future occupants.

1. Physical Injury Which Excludes All Property Damage

The simplest definition of physical injury would exclude all property damage. Of course, by using this definition all damage claims except those involving personal injuries would be decided solely under contract law. Denying recovery in tort for all property damage makes sense when the parties are in privity with each other because they can allocate risk by private agree-

group of people, such as employees or suppliers. Loss spreading may also occur in the form of lower dividends to stockholders. *Id.* at 526.

²⁸² See generally Alvin B. Rubin, *Mass Torts and Litigation Disasters*, 20 GA. L. REV. 429 (1986); Margaret I. Lyle, Note, *Mass Tort Claims and the Corporate Tortfeasor: Bankruptcy Reorganization and Legislative Compensation Versus the Common-Law Tort System*, 61 TEX. L. REV. 1297 (1983); Note, *The Manville Bankruptcy: Treating Mass Tort Claims in Chapter 11 Proceedings*, 96 HARV. L. REV. 1121 (1983).

²⁸³ See George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521 (1987) (discussing the negative effect that increases in third-party liability have had on the insurance industry).

²⁸⁴ See Ralph A. Winter, *The Liability Crisis and the Dynamics of Competitive Insurance Markets*, 5 YALE J. ON REG. 455, 458 (1988).

²⁸⁵ W. Kip Viscusi, *The Dimensions of the Product Liability Crisis*, 20 J. LEGAL STUD. 147, 150-52 (1991).

ment.²⁸⁶ However, some commentators criticize this approach because it provides no protection for third parties.²⁸⁷

2. *Physical Injury Limited to Physical Damage to Property Accompanied by a Contemporaneous Personal Injury*

Another definition of physical injury excludes property damage unless the victim also sustains a contemporaneous personal injury from the defective product.²⁸⁸ This definition would allow victims to recover for property damage without having to meet a privity requirement, thus avoiding the harsh effects of a definition of physical injury that excludes property damage entirely. Additionally, this approach would reduce administrative costs because victims would not have to split their cause of action into tort and contract claims to receive full compensation for their injuries.²⁸⁹

3. *Physical Injury Which Involves Direct and Immediate Physical Damage to Collateral Property*

Yet another definition of physical injury includes any direct and immediate physical damage to the victim's collateral property. In such cases, a property owner could sue in tort even though he or she had suffered no personal injury. However, injury to the product itself, regardless of its character, would still be treated as an economic harm.

"Physical damage" involves the destruction or alteration of the property's physical structure. In addition, the damage sustained must result from direct physical contact between the defective product and the plaintiff's property. Damage caused by fire, collision, or explosion would satisfy this requirement. Furthermore, the damage sustained must occur at the time of contact with the defective product.²⁹⁰ Obviously, damage that results from slow

²⁸⁶ See Kaprelian, *supra* note 106, at 534-36.

²⁸⁷ One solution is to waive the privity requirement in such cases and allow injured parties to bring warranty actions against sellers of defective products. *Id.* at 539. Of course, this rule would also have to provide that third parties would not be bound by any disclaimers between the contracting parties.

²⁸⁸ A minimum threshold level of personal injury would have to be required to prevent plaintiffs with property damage claims from claiming personal injuries merely to take advantage of tort remedies.

²⁸⁹ See Turner, *supra* note 145, at 154.

²⁹⁰ However, the discovery rule would be applicable to internal damage that occurred immediately but did not manifest itself until later.

deterioration of the plaintiff's property will not meet this definition of physical harm.²⁹¹

4. *Physical Injury Which Includes Safety-Related Expenditures*

The fourth, and currently used, definition treats as a physical injury any expenditure made by a property owner to avoid a risk of future harm to persons or collateral property.²⁹² Unlike other definitions, this rule allows property owners to recover for indirect, as well as direct, damage to their property. Thus, property owners would be able to recoup abatement costs even though their property had not been structurally damaged or destroyed by a defective product. In effect, property that has been rendered unsafe because of exposure to a toxic substance is deemed to be physically damaged even though it is structurally unchanged.

C. *Choosing an Appropriate Definition of Physical Injury*

The courts should adopt a definition of physical injury that is compatible with contemporary notions of public policy. Viewed from this perspective, the first definition is inadequate because manufacturers whose products cause property damage may escape liability unless they can be held accountable under contract law. This loophole not only leaves many injured parties without a remedy, but it also allows manufacturers to externalize a significant number of accident costs.

The second definition provides more protection to injured parties. Arguably, liability for property damage when accompanied by personal injuries should encourage manufacturers to make safer products, at least when it is cost-effective. Increased liabil-

²⁹¹ This proposed definition is similar to the "sudden and calamitous" test discussed earlier. See Connaughton, *supra* note 4, at 523. However, that test is an exception to the rule against tort recovery for damage to the product itself. The rule suggested here would apply only to collateral property.

²⁹² See Adams-Arapahoe Sch. Dist. No. 28-J v. GAF Corp., 959 F.2d 868, 873 (10th Cir. 1992); City of Greenville v. W.R. Grace & Co., 827 F.2d 975, 977-78 (4th Cir. 1987); City of Wichita v. United States Gypsum Co., 828 F. Supp. 851, 855-56 (D. Kan. 1993); Independent Sch. Dist. No. 197 v. W.R. Grace & Co., 752 F. Supp. 286, 301-02 (D. Minn. 1990); Drayton Pub. Sch. Dist. No. 19 v. W.R. Grace & Co., 728 F. Supp. 1410, 1413 (D.N.D. 1989); Board of Educ. v. A, C & S, Inc., 546 N.E.2d 580, 588 (Ill. 1989); 80 S. Eighth St. Ltd. Partnership v. Carey-Canada, Inc., 486 N.W.2d 393, 397 (Minn. 1992); School Dist. No. 30 v. United States Gypsum Co., 750 S.W.2d 442, 457 (Mo. Ct. App. 1988); Livingston Bd. of Educ. v. United States Gypsum Co., 592 A.2d 653, 656 (N.J. Super. Ct. App. Div. 1991).

ity for manufacturers also permits a greater degree of loss spreading. However, this definition may still be too narrow because it leaves those who suffer *only* property damage without any tort claim against the product manufacturer.

The primary argument for the third definition, which allows plaintiffs to recover for direct and immediate physical damage to their collateral property, is that most courts seem to apply it (though not always explicitly) in ordinary product liability cases. This definition is also defensible on resource-allocation and loss-spreading grounds. First, holding manufacturers liable for direct and immediate damage to property provides an additional incentive to make safer products.²⁹³ Because property damage claims are relatively predictable,²⁹⁴ manufacturers can take them into account when they make decisions about product safety. Second, physical damage to property arguably has the same dislocative effect on a victim, particularly an individual, as a personal injury. Therefore, public policy supports loss spreading in these circumstances.

At first blush, the fourth definition of physical harm, with its broader scope of liability for product sellers, appears to achieve even greater levels of allocative efficiency and loss spreading than the other three. However, on closer inspection, neither allocative efficiency nor loss-spreading policies support a definition of physical injury that allows property owners to recover abatement costs when a hazardous product threatens third parties.

There is little reason to think that imposing tort liability on product sellers for abatement costs will promote allocative efficiency.²⁹⁵ First, as mentioned earlier, in the absence of serious market imperfections, contract law is usually more efficient than tort law.²⁹⁶ No bracket imperfections exist here. Property owners have sufficient knowledge and economic power to allocate these costs by contract. In addition, property owners know as much, or more, than product sellers about the necessity and cost of abatement.²⁹⁷ Moreover, property owners, who are usually commercial or governmental entities, have more economic power than ordinary consumers. Therefore, property owners and

²⁹³ See Linehan, *supra* note 157, at 228.

²⁹⁴ See Heiner, *supra* note 12, at 1345 (manufacturer can estimate the risk of property damage).

²⁹⁵ See Brenza, *supra* note 3, at 306.

²⁹⁶ See Kaprelian, *supra* note 106, at 526.

²⁹⁷ See Brenza, *supra* note 3, at 306.

product sellers seem ideally suited to allocate responsibility for future abatement costs among themselves through the bargaining process.

Furthermore, the imposition of tort liability for abatement costs will not reduce product-related injuries. In the case of asbestos, manufacturers no longer have any control over product-related health risks. The only way to reduce further accident costs is by insulating occupants from further exposure to asbestos-containing material in the building or by removing such hazardous material altogether. Obviously, the property owner, not the asbestos manufacturer, is the only one who can determine whether or not to initiate abatement measures. The property owner's decision to pay for abatement measures will be based largely on his or her concern about potential tort liability to building occupants for personal injuries caused by exposure to asbestos.²⁹⁸ Asbestos suppliers, on the other hand, who have no control over private property, cannot dictate abatement decisions by building owners. Therefore, imposing tort liability on asbestos manufacturers will not significantly affect the safety of building occupants; it can only transfer wealth from manufacturers to property owners.²⁹⁹

It has been suggested that the imposition of liability for abatement costs will encourage manufacturers to monitor the health effects of their products more carefully.³⁰⁰ Of course, this argument has little relevance to asbestos products because the health risks are already well-known. It might be applicable to manufacturers of products whose health risks are more uncertain. However, even in this context, one may contend that manufacturers already have a sufficient incentive to monitor health effects because they are already liable for personal injuries. While liability for abatement costs might theoretically provide an additional incentive to discover unknown health risks, product manufacturers may not take this factor into account unless they can accurately predict its effect on their potential liability.

The loss-spreading rationale also fails to support the imposition of tort liability for abatement costs on product manufacturers. In fact, subjecting manufacturers to added liability may actually defeat loss-spreading policies rather than facilitate them.

²⁹⁸ See Connaughton, *supra* note 4, at 537.

²⁹⁹ See Brenza, *supra* note 3, at 308.

³⁰⁰ See Connaughton, *supra* note 4, at 537.

If a product is actually a health hazard, its manufacturer will already be liable for numerous personal injury claims. Consequently, in such a case, a product manufacturer may not be able to pay abatement claims as well as personal injury claims. The plight of asbestos manufacturers provides a good illustration of this problem. Asbestos companies, which have already paid billions of dollars in personal injury claims,³⁰¹ may now have to pay an additional \$50 billion to property owners.³⁰² However, it is doubtful that they can fully compensate both groups of claimants.³⁰³ Arguably, in such cases, personal injury claims should have priority over property damage claims. Excluding abatement costs from the definition of physical injury will increase the chances that personal injury claims will be paid.

CONCLUSION

There is considerable disagreement about whether property owners should be allowed to maintain tort actions against product sellers when they are required to remove hazardous substances from their buildings. From a doctrinal point of view, the issue hinges on whether expense of abatement removal can be classified as a physical injury or whether it should be treated as an economic loss. In most jurisdictions, damages for physical injuries are recoverable in tort, but economic losses can only be recovered in contract.

Although the issue is not entirely clear, abatement costs appear to be an economic harm rather than a physical injury. Nevertheless, at least in the case of asbestos products, virtually every court has classified the cost of removal and replacement as a physical injury. Presumably, these courts will apply this same line of reasoning to cases involving other toxic products as well.

However, abatement costs ought to be treated as economic losses. Not only is this approach consistent with the traditional dividing line between physical injury and economic loss, but it is also sound from a policy perspective. Therefore, courts should adopt a definition of physical injury that limits tort claims for property damage to situations where there is direct and immedi-

³⁰¹ See Hagan et al., *supra* note 17, at 2.

³⁰² See *id.* at 19.

³⁰³ Jeffrey M. Nelson, Note, *Asbestos Abatement: The Allocation of Liability*, 40 S.C. L. REV. 1043, 1052 (1989) (payment of personal injury and punitive damage claims have greatly depleted the financial resources of asbestos manufacturers).

ate physical damage to property other than the defective product itself.